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ABSTRACT

A national study of users and non-users of public access online catalog systems (OPACs) was undertaken at 29 libraries, representing 15 computer systems, to provide data and interpretations useful to system designers and library administrators. The findings indicate that users have overwhelmingly positive responses to OPACs. Non-users have positive attitudes toward OPACs, believe they are likely to use them eventually, and that they can learn to use them quickly and easily. Problem areas identified were using and understanding codes and abbreviations, understanding terminal displays, command and control, subject searching, known-item searching, patience with response time, queuing and terminal dialog, and library support services. The most important determinant of user satisfaction was effective subject searching, followed by library support services, command and control, and known-item searching. Users recommend that library administrators make terminals highly visible, provide printers, add terminals, expand databases, and improve systems rather than provide user training. Designers are asked to consider the user interface and to enhance subject searching, incorporate circulation information, and provide brief bibliographic display formats. This extensive report includes 12 appendices, 82 tables and 12 figures. (Author/LMM)

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USERS LOOK AT ONLINE CATALOGS:
Results of a National Survey of Users and Non-Users of Online Public Access Catalogs

Final Report to the
Council on Library Resources

Division of Library Automation
and
Library Research and Analysis Group

Office of the Assistant Vice President--
Library Plans and Policies
University of California Systemwide Administration
Berkeley, California 94720

November 16, 1982

IR050349

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TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

NOTE TO THE READER

This is one of several project reports for this study to be submitted to the Council on Library Resources under separate grant and contract proposals. Reports will also be submitted by:

- J. Matthews and Associates, Inc.
- The Library of Congress
- Online Computer Library Center, Inc.
- The Research Libraries Group, Inc.

The *Data Collection Manual and Sampling Plan* (March 1982), produced by the Research Libraries Group, and the *Data Analysis Plan* (August 1982), produced by the University of California, have been submitted to the Council as separate reports. Additional reports from the University of California, covering analysis of computer transaction logs and the data for the University of California libraries will be forthcoming at a later date.

All reports will be available through the ERIC information service.

A machine-readable file containing all data from the user and non-user questionnaires, suitable for analysis under SPSS, SAS, or other statistical analysis software packages, will be available from the University of California at nominal cost. Full documentation will be provided. For further information, please contact the Project Manager.

ACKNOWLEDGEMENTS

We would like first to acknowledge the financial support of the Council on Library Resources, and the advice, support, and guidance offered by C. Lee Jones, CLR's program officer for this project.

Secondly, we would like to acknowledge ourselves: Edwin B. Brownrigg, UC's Director of Library Automation, Principal Investigator; Gary S. Lawrence, Director of Library Research and Analysis, Project Manager; Ray R. Larson, Programmer/Analyst; Vicki Graham, Documentalist/Bibliographer; Betsy Llosa-Sandor and Joyce Travlos, Adminstrative Assistants, and Betty Bronson, Grant Coordinator and the editor of this report.

Throughout the project we received valuable advice and assistance from the other principal investigators and their staffs: Neal Kaske, Charles Hildreth and Karen Markey at OCLC; Robert Zich and Rosemary Anderson at the Planning Office, Library of Congress; Douglas Ferguson, David Miller, and Daphna Baratz at the Research Libraries Group; and Joe Matthews of J. Matthews and Associates, Inc. Our consultant on methodology and analysis, Dr. Paul Kantor, provided useful insights when they were most needed. Extra appreciation is due the RLG staff, who rapidly, unerringly, and (mostly) cheerfully conducted the thankless task of handling the machine scanning of the questionnaires.

Special thanks are reserved for two groups without whom the study could not have happened: the staff of the 29 participating libraries, who successfully undertook the difficult and time-consuming job of administering the questionnaires, and the 12,075 library users who willingly gave their time to answer the multitude of questions we put before them.

We are indebted for the comments and suggestions of the CLR staff, the principal investigators, our consultant, and the numerous audiences at various local, state and national meetings before whom we have had occasion to discuss this project. If, in spite of their help, errors in findings or interpretations remain, the responsibility is ours.

Edwin B. Brownrigg
Principal Investigator

Gary S. Lawrence
Project Manager

SUMMARY

As one of the five organizations conducting a coordinated study of users and non-users of online catalogs, funded by the Council on Library Resources, the University of California has a dual role. First, it is a participant in the study contributing its share of data and analysis, and second, it is the data processing "utility" for the user and non-user questionnaire data collected by all the participating organizations. It is in the latter role that we submit to the Council this *Final Report* on the nationwide survey of users of online catalogs.

The emphasis in this document is on reporting and analyzing results that appear common to all the participating libraries and computer systems. Separate reports to be submitted by UC, the Research Libraries Group, the Library of Congress, the Online Computer Library Center, and J. Matthews and Associates, Inc., will explore the characteristics of particular systems, and the attitudes of their users, in greater detail.

The objectives of the national survey were:

1. To produce data and interpretations that will enable designers of public online catalogs to improve system interface features, including command language, displays, search methods, and other matters related to catalog hardware and software.

2. To produce data and interpretations that will enable libraries to improve the implementation and support services (the organization interface) for public online catalogs.

3. To collect additional data that will enable libraries to remove barriers to use of the online catalog and to extend service to potential users.

Between March and May of 1982, self-administered questionnaires developed jointly by the project consortium were completed by 8,094 users and 3,981 non-users in 29 participating libraries, representing 15 different online catalog systems.

We found that most users of online catalogs (OLCs) are frequent users of libraries and of other library catalogs (e.g., card catalogs), but not necessarily users of other computer systems. Most users first discover the OLC by seeing its terminals in the library. Although the difference is not large, older patrons and women are less likely to be users of the OLC. (*Chapter 3*)

Non-users (library users who have never used the OLC) think that they can learn to use the online catalog quickly and easily, show an overwhelmingly favorable attitude toward online catalogs, often think they will prefer it to the card catalog, and say they are likely to use it in the future. The reasons most often given for not using the OLC are lack of time to learn about it, and not having taken training to use it. A critical analysis of these data, however, suggests that most patrons who do not use the online catalog are infrequent users of libraries and of library catalogs in general. (*Chapters 3 and 7*)

Most OLC users conduct subject searches; even in academic libraries, the amount of subject searching is roughly equal to the amount of "known-item" searching. There is little apparent demand for detailed bibliographic information. As much as forty percent of all searches involve use of multiple access points, but we observe that some users do not actually use all the information they bring to a search. (*Chapter 4*)

The most serious problems experienced by users during their OLC searches involve: increasing the search result when too little is retrieved; finding the correct subject term for their search; remembering what materials are included in the OLC; limiting large retrievals; using truncation during the search; controlling the search process; and slow response from the computer. We found few clear relationships between searching problems and the various features used by OLCs to address them, but there is evidence that while many system features are indeed helpful in specific situations, they may be difficult to use and their presence can serve to confuse as much as to assist the user. (*Chapter 5*)

When users get help during a search, most get it from signs and brochures or from the OLC system itself. First-time users are an exception; they rely chiefly on library staff for assistance. Assistance and instruction provided online can help, but only if a goodly amount is available--a little online instruction may be worse than none at all. Many users expressed concern about availability of terminals, and about the availability and quality of printed aids. One of the chief problems was the inadequacy of writing space at the OLC terminal. Use of printers was also a frequently-mentioned problem. (*Chapter 6*)

Users appear satisfied with the online catalog. About 80 percent find some relevant material during a search, and a similar percentage expresses satisfaction with the search results. About half the users also find things of interest that they were not specifically looking for. Over 90 percent have a favorable attitude to the OLC in general, and 75 percent prefer it to the catalog form it replaces or to supplements; only 9 percent indicate a clear preference for the card catalog. Frequent users are, on the whole, more successful and more satisfied than infrequent users, but first-time users also show high levels of satisfaction. (*Chapter 7*)

When asked what should be done to improve the OLC system, users said they wanted to: view related search terms; search tables of contents and indexes of books; get information on circulation status and availability; and print their search results. To improve access, they want terminals, terminals and more terminals; more terminals in the library, terminals spread throughout the library, and access from places other than the library. Opinion about what to add to the database was spread rather widely, although the most popular preferences were for newspapers, government documents, journal titles, and retrospective conversion of older material; only 11 percent could think of nothing they wanted to add. (*Chapter 8*)

We found that users' problems could be organized into seven areas, or factors:

1. Using and understanding codes and abbreviations.
2. Understanding terminal displays.
3. Command and control.
4. Subject searching.
5. Known-item searching.
6. Patience with response time, terminal queuing, and terminal dialog.
7. Library support services.

Analysis shows that effective subject searching is the most important determinant of user satisfaction, followed by library support services, command and control, and known-item searching. Problems with codes and abbreviations and with response time and waiting are less important, and problems in understanding terminal displays have little influence on user satisfaction. (*Chapter 9*)

Among the implications of these findings for libraries are:

- The public is willing, even enthusiastic, to accept online catalogs.
- Libraries should make their OLC terminals highly visible and provide plenty of space for writing and personal belongings.
- Administrators should plan to: provide printers; add lots of terminals; and expand the database.

- To make the OLC attractive to non-users, promote use of the library: the online catalog will promote itself.

- Provide more and better printed aids, and plan to supply online assistance and instruction.

- To improve user satisfaction with the online catalog, improve the system, not the users' training.

Among the implications for designers of online catalog systems:

- When designing new features and capabilities, pay close attention to the user interface; poorly integrated features hinder rather than help.

- Subject searching is important--do what you can to help the user. Specifically, allow users to browse the subject index, headings file, or thesaurus, and institute keyword searching for subjects.

- Clean up the user interface--make it simple, concise, and syntactically consistent; speed up menu displays.

- Provide circulation status information, and make it as easy as possible for users to construct multiple-index searches.

- Provide relatively brief bibliographic displays; make full displays optional.

- Do not give high priority to *very* short response times; the users are relatively tolerant, and the resources can be used for other system improvements.

Finally, we see the following implications for the profession as a whole:

- Enrich subject access; subject searching is the predominant use of OLCs, and one of the highest priorities for improvement, according to the users.

- Simplify subject access. Help the users find the search terms they are looking for by providing more rigorous vocabulary control or by linking synonymous and related terms.

(*Chapter 10*)

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Chapter 1

BACKGROUND

In early 1981 the Council on Library Resources funded five organizations to conduct a coordinated study of user and non-user responses to public online catalogs. The principals in the project consortium were:

- J. Matthews and Associates, Inc.
- The Library of Congress
- The Online Computer Library Center, Inc. (OCLC)
- The Research Libraries Group (RLG)
- The University of California

The five investigations are independent in the sense that each principal plans to contribute unique methodologies, data, and analyses to the project, and each will report separately. The investigations are coordinated in the sense that they are all built around a jointly-developed survey of users and non-users in all the participating libraries. User and non-user questionnaires were developed, tested and revised by the consortium as a whole, and standard methods of administering and analyzing the questionnaires were adopted by all the participants. The history and organization of the Public Online Catalog Study sponsored by the Council on Library Resources are described in detail in a recent article written by the principal investigators in the project, to which readers of this report are referred.[1]

The University of California has a dual role in this project. As a joint participant, the University will analyze and report on questionnaire data from the UC libraries, and contribute additional data and analyses from the transaction monitoring system of the UC online union catalog, MELVYL. The University has also served as the "data processing utility" for the user and non-user servey, providing data conversion, computing, and statistical analysis services for questionnaires contributed by all participants in the project.

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[1] Douglas Ferguson, *et al.*, "The CLR Public Online Catalog Study: An Overview," *Information Technology and Libraries*, June 1982, pages 84-97.

This report flows from the second role, which includes the responsibility to report on user and non-user questionnaire results that apply to all twenty-nine libraries participating in the study.

1.1 GOALS OF THE QUESTIONNAIRE STUDY

The user and non-user questionnaires developed by the project consortium focused on identifying the problems that users of online catalogs experience, and their preferences for improving the catalog. Non-users were asked to identify the barriers to their use of the online catalog. The specific goals of the questionnaire study were:

1. To produce data and interpretations that will enable designers of public online catalogs to improve system interface features, including command language, displays, search methods, and other matters related to catalog hardware and software.

2. To produce data and interpretations that will enable libraries to improve the implementation and support services (the organization interface) for public online catalogs.

3. To collect additional data that will enable libraries to remove barriers to use of the online catalog and extend service to potential users.

1.2 DATA SOURCES

The sources of data used in this report include user and non-user questionnaires, and information about the participating libraries and computer catalog systems supplied by the participants.

1.2.1 *User Questionnaires*

Users were contacted at the point of use of the online catalog. Typically this was in a library unit but some terminal sites were outside library units. The main study used a detailed questionnaire, which was provided by the data collector after willingness to participate was determined, and after the individual was selected into the sample. Seating space was provided for completing the questionnaire and respondents were encouraged to complete it before leaving the terminal site. Details of the methodology for collecting user data are provided in the Cycle 2 Data Collection Manual.[2] The User Questionnaire will be found in Appendix A. The University of California, unlike the other participants, administered the User Questionnaire online, as a subsystem of the online catalog, but the text of the questionnaire and the method of administration parallelled those used at other locations.

1.2.2 *Non-User Questionnaires*

Non-user groups, parallel to user groups, were selected to complete a questionnaire in the library. Strictly speaking, these were non-users of online catalogs who are users of library services. Details of the methodology for collecting non-user data are provided in the Cycle 2 Data Collection Manual.[3] The Non-User Questionaire itself will be found in Appendix B.

1.2.3 *Organization-Supplied Data*

1.2.3.1 *Computer Catalog Profiles*

Data about the libraries participating in the project, and their computer catalogs, were derived from Computer Catalog Profile questionnaires completed by the participating libraries. The Computer Catalog Profile is Appendix J.

These data were used in two ways: (1) to construct new analytic variables, and (2) to provide descriptive information for background purposes. Some profile data can be used directly for analytical purposes. For example, data on the number of records and the percentage of the collection in the catalog can be included in multivariate analyses of the factors contributing to searching success.

1.2.3.2 *Questionnaire Mark-Ups*

Each participating library was asked to mark on a copy of the User Questionnaire those questions that did not apply to its system (of the questions 11-42, 43h, and 44-46). Responses were adjusted on the basis of these submissions. For example, in systems without subject searching capabilities, questionnaire responses dealing with *experiences* with subject searching were recoded to missing values, eliminating system-capability biases in the aggregate analysis of subject-searching problems.

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[2] The Research Libraries Group, *Public Online Catalog Study: Data Collection Manual*, March 16, 1982.

[3] Research Libraries Group, *op. cit.*

1.3 PARTICIPANTS

Twenty-nine library systems participated in the nationwide study of the online catalog. Table 1 lists all participating libraries grouped by principal investigator.

1.4 THE REPORT

This report is limited to a discussion of findings from analyses of the user and non-user questionnaires and related data received from all libraries participating in the study. A later report will discuss findings from analyses of computer transaction logs. Chapter One is introductory. Chapter Two describes the two cycles of data collection, development and revision of the data collection process and instruments, and the administration of the questionnaires. In Chapter Three characteristics of users of the online catalog are discussed. Users and non-users are compared according to demographic and library use characteristics, and the question of why people don't use the online catalog is addressed.

Chapters 4 to 8 deal with use and evaluation of the online catalog, its features, and the library environment. Chapter Four focuses on characteristics of online catalog searches, describing the types of information people bring to the search and how this information is used. Chapter Five examines use of features and problems encountered by users, while Chapter Six focuses on problems users experience with various aspects of the library environment, including instruction and terminal availability. User evaluations of particular searches and of the catalog as a whole are discussed in Chapter Seven. Attention is also given to non-user perception and evaluation of the online catalog. Chapter Eight describes improvements and additions to the catalog suggested by users. There are also several appendices of documents and data related to the project.

TABLE 1

Participating Libraries

Library/Locations	*Library Type*	*System Name*
	University of California (DLA) Group	
Nine campuses	ARL	MELVYL
	J. Matthews & Associates, Inc. Group	
Claremont Colleges	Acad.	Claremont OLC
Evanston Public Library	Public	CLSI
Mankato State University	Acad.	Mankato OLC
Mission College	Comm. Coll.	ULISYS
Pikes Peak Library District	Public	Pikes Peak OLC
Steven F. Austin State Univ.	Acad.	DataPhase
West Valley Coll.	Comm. Coll.	ULISYS
	RLG Group	
Dartmouth College	ARL	Dart. OLC
Northwestern Univ.	ARL	NOTIS/LUIS
Stanford University	ARL	RLIN II
Library of Congress	State/Fed.	MUMS/SCORPIO
	OCLC, Inc. Group	
Ohio State University	ARL	LCS
Syracuse University	ARL	SULIRS
Dallas Public Library	Public	LSCAN
Iowa City Public Library	Public	CLSI
State Lib. of Ohio	State/Fed.	OCLC
Univ. of Akron	Acad.	OCLC
Univ. of Texas, Dallas	Acad.	OCLC
Ohio Univ., Athens	Acad.	OCLC
Univ. of Texas, Austin	Acad.	OCLC

Chapter 2

QUESTIONNAIRES

2.1 CYCLE 1

2.1.1 Development

The questionnaires were designed to capture particular information about users and non-users of online catalogs. Elements of the user interface were identified, and questions were developed to elicit information on five separate issues: 1. Search methods and uses. 2. Problems with the system and its features. 3. Problems with the library organization. 4. Improvements and additions to the online catalog. 5. Demographic characteristics of the user and non-user.

2.1.2 Testing

Cycle 1 data collection was a pilot study to test and evaluate data collection processes and instruments. User and non-user questionnaires for Cycle 1 are Appendices K and L. During the period of data collection, from November, 1981 to December, 1981, 2,680 user and 1,840 non-user questionnaires were collected. Table 2 lists the number of questionnaires received from each library system participating in the pilot study. Data from Cycle 1 was tested for consistency, response bias, and problems arising from questionnaire length. Detailed procedures for these processes will be found in the Data Analysis Plan Version 1.0, Chapter 4.[*]

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[*] Gary S. Lawrence, Ray. R. Larson, and Vicki Graham, *Online Catalog Evaluation Project, Data Analysis Plan, Version 1.0*, Berkeley: University of California Systemwide Administration, October 20, 1982, available from the authors on request.

TABLE 2

Final Questionnaire Returns, Cycle 1

LIBRARY SYSTEM	USER *Number*	 *Percent*	NON-USER *Number*	 *Percent*
STEVEN F. AUSTIN	65	4.3	128	7.0
CLAREMONT	20	1.3	52	2.8
DALLAS PUBLIC	103	6.8	84	4.6
DARTMOUTH	18	1.2	224	12.2
UNIV OF CALIF	1155	[1]	[2]	
EVANSTON	62	4.1	143	7.8
IOWA CITY	197	12.9	105	5.7
LIBRARY OF CONGRESS	100	6.6	162	8.8
MANKATO	54	3.5	122	6.6
MISSION	26	1.7	86	4.7
NORTHWESTERN	120	7.9	209	11.4
OHIO STATE	300	19.7	132	7.2
PIKES PEAK	124	8.1	209	11.4
SYRACUSE	262	17.2	100	5.4
WEST VALLEY	74	4.9	84	4.6
TOTAL	1525	100.0	1840	100.0

NOTES: [1]The University of California User Questionnaires were analyzed separately for the pilot cycle, and are not included in the percentages reported here. [2]The University of California administered the User Questionnaire online, as a subsystem of the computer catalog, and did not administer non-user questionnaires.

2.1.3 Revisions

As a result of Cycle 1, several changes in procedures and instruments were made. Both the user and non-user questionnaires were revised and shortened. Wording of questions was improved and response categories were refined, partially through the use of write-in comments from respondents. Open ended categories (i.e. "Other") were dropped. Data collection and control procedures were improved. Computer System Profile questionnaires (discussed in Chapter 1) were designed in order to obtain information from each library and computer system.

2.2 CYCLE 2

2.2.1 *Development*

The user and non-user questionnaires were discussed and revised in a meeting of the Project Advisory Committee (Appendix I) in Berkeley on December 17, 1981. Final versions of both questionnaires appear in Appendices A and B.

2.2.2 *Administration*

Data collection for Cycle 2 was conducted in April and May of 1982. During this time, 8,094 user and 3,981 non-user questionnaires were collected. Table 3 shows the number of questionnaires received from each site. Most participating libraries distributed machine-readable paper questionnaires. Users were selected immediately after leaving the terminal. Non-users were selected while in the library. For detailed descriptions of data collection processes see the Data Collection Manual.[5] The University of California administered online questionnaires using the questionnaire subsystem of the online catalog. Every 25th user, regardless of campus location or time of day, was selected. Detailed description of the online questionnaire subsystem can be found in the Phase I report.[6]

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[5] Research Libraries Group, *op. cit*.

[6] Ray R. Larson, *Development and Testing of Data Collection and Analysis Tools*. (*Final Report to the Council on Library Resources*). Berkeley, CA: University of California, Division of Library Automation, July 1981.

TABLE 3

Final Questionnaire Returns, Cycle 2

LIBRARY SYSTEM	USER Number	USER Percent	NON-USER Number	NON-USER Percent
AKRON	132	1.6	100	2.5
ATHENS	51	0.6	106	2.7
STEVEN F. AUSTIN	111	1.4	160	4.0
CLAREMONT	49	0.6	54	1.4
DALLAS PUBLIC	1081	13.4	299	7.5
DARTMOUTH	41	0.5	232	5.8
UNIV OF CALIF	1259	15.6	[1]	
EVANSTON	252	3.1	254	6.4
IOWA CITY	410	5.1	144	3.6
LIBRARY OF CONGRESS	525	6.5	298	7.5
MANKATO	281	3.5	240	6.0
MISSION	17	0.2	47	1.2
NORTHWESTERN	616	7.6	276	6.9
OHIO STATE	1247	15.4	282	7.1
PIKES PEAK	304	3.8	379	9.5
OHIO STATE LIBRARY	5	0.1	86	2.2
STANFORD	95	1.2	342	8.6
SYRACUSE	1339	16.5	294	7.4
UNIV TEXAS AUSTIN	104	1.3	103	2.6
UNIV TEXAS DALLAS	37	0.5	104	2.6
WEST VALLEY	138	1.7	181	4.5
TOTAL	8094	100.0	3981	100.0

NOTES: [1] The University of California administered the User Questionnaire online, as a subsystem of the computer catalog, and did not administer non-user questionnaires.

2.3 *CYCLE 1 AND CYCLE 2 QUESTIONNAIRES: A COMPARISON*

Table 4 compares User Questionnaire response rates from the two cycles of data collection. Table 5 shows response rates for the Non-User Questionnaire.

TABLE 4

Questionnaire Acceptance Rates, User Questionnaire

Library	*Acceptance Rate (%)*	
	Cycle I	*Cycle II*
Akron		80.50
Athens		70.27
Austin	71.7	72.39
Claremont	73.3	47.52
Dallas		72.44
Evanston	55.0	65.92
Library of Congress	85.4	82.94
Mankato	71.4	70.46
Mission College	41.0	38.89
Northwestern	66.6	66.42
Pikes Peak	78.2	44.94
Stanford		82.35
West Valley		28.60
Univ. Texas, Dallas		80.85
Dartmouth	76.9	87.50
Ohio State University	62.5	50.20
State Library-Ohio		57.14
Iowa City Public	64.0	70.90
Syracuse	47.8	93.94
Univ. of California	51.2	37.45

Among the 13 libraries for which we have both Cycle 1 and Cycle 2 data for the User Questionnaire, the acceptance rate for Cycle 2 was higher than for Cycle 1 in 5 cases, and lower in 8 cases (Table 4); this would appear to be, at least in part, a consequence of conducting both a large-scale pilot and a full-scale study of the same populations in fairly rapid succession.

Acceptance rates for the Cycle 2 study were adequate: of the 20 libraries for which we have data, 11 (55 percent) had acceptance rates of 70 percent or better, 6 (30 percent) had rates of 80 percent or better, and Syracuse Uni-

TABLE 5

Questionnaire Acceptance Rates, Non-User Questionnaire

Library	*Acceptance Rate (%)*	
	Cycle I	*Cycle II*
Akron		70.92
Athens		55.85
Austin	23.9	61.66
Claremont	76.0	64.10
Dallas Public		69.89
Evanston	58.2	60.08
Library of Congress	59.1	72.58
Mankato	50.5	63.08
Mission College	45.2	75.00
Northwestern	45.9	54.55
Pikes Peak	74.3	57.24
Stanford		72.55
West Valley		74.57
Univ. Texas, Dallas		70.27
Dartmouth	86.1	84.62
Ohio State University	31.3	25.65
State Library-Ohio		66.67
Iowa City Public	24.3	29.24
Syracuse	31.4	24.08

versity showed the remarkable acceptance rate of 94 percent. On the other hand, 5 libraries (25 percent) found that fewer and 50 percent of potential respondents agreed to complete the questionnaire, so there are some potential problems of self-selection bias in the user data. We suspect that the bias, if any, is in a direction that favors the online catalog, but no evidence to test this hypothesis is available.

With the non-user questionnaire, we see that, of 12 libraries for which we have data on both cycles, 7 had improved acceptance rates on cycle 2, and the rates declined for 5 libraries (Table 5). Non-user response rates were considerably lower: only 7 of the 19 libraries in Table 5 (37 percent) had acceptance rates above 70 percent, and only one, Dartmouth, exceeded eighty percent. However, only 3 libraries (16 percent) had acceptance rates below 50 percent. The possibility of self-selection bias is somewhat greater for the Non-User Questionnaire, but the direction of the bias (if present) is not clear.

Although the revisions to the questionnaires following the pilot study did not generally improve *acceptance* rates, *completion* rates for those who did agree to accept a questionnaire were considerably higher. The completion rate data for the two cycles has not been collated and analyzed in detail, but aggregate results indicate that the proportion of users who completed all parts of the user questionnaire rose from about 77 percent in Cycle 1 to over 90 percent in Cycle 2.

Chapter 3

USERS AND NON-USERS OF ONLINE CATALOGS

3.1 GENERAL

The text of the User Questionnaire is found in Appendix A, and the Non-User Questionnaire in Appendix B. Appendix C contains frequency tables for all responses to the User Questionnaire; frequencies for Non-Users are found in Appendix E. Appendix D tabulates User Questionnaire responses by type of library,[7] and Appendix F has similar tabulations for the non-users. In this chapter, the reader will often be referred to these appendices for quanttiative information about questionnaire responses. Only the most significant findings will be discussed here. Non-User questions 7 through 15 of the Non-User Questionnaire addressed the demographic and library use characteristics of online catalog users. User questions 57 though 59 and Non-User questions 13 through 15 were answered only by respondents at college and university libraries. Responses to Questions 57-59 (Non-User questions 13-15) from Public and State/Federal Libraries have been eliminated from the data file.

Figure 1 lists the text of questions related to use of the library and its catalogs. Figure 2 lists the questions about personal characteristics asked of all respondents, and Figure 3 lists the demographic questions asked only of respondents at college and university libraries. In these figures, the User Questionnaire number is given first, and the corresponding Non-User question number, where relevant, is given in parentheses.

A tabulation of responses to the User Characteristics questions will be found in pages 49-64 of Appendix C. These responses are broken down by type of library in pages 73-86 of Appendix D.

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[7] See Table 1 for a list of library types and the specific libraries included in each type.

48 (*7*)[1] I come to the library:
- a. Daily
- b. Weekly
- c. Monthly
- d. About four times a year
- e. About once a year
- f. Not before today

49. I use this computer catalog:
- a. Every library visit
- b. Almost every visit
- c. Occasionally
- d. Rarely
- e. Not before today

50 (*8*) I use this library's book, card or microfilm catalog:
- a. Every library visit
- b. Almost every visit
- c. Occasionally
- d. Rarely
- e. Not before today

51 (*9*) I use a computer system other than the library's computer catalog:
- a. Daily
- b. Weekly
- c. Monthly
- d. About four times a year
- e. About once a year
- f. Never

52. I first heard about this computer catalog from: (Mark *ONE* only)
- a. Noticing a terminal in the library
- b. Library tour, orientation or demonstration
- c. An article or written announcement
- d. A course instructor
- e. A friend or family member
- f. Library staff

53. I learned how to use this computer catalog: (Mark *ALL* that apply)
- a. From a friend or someone at a nearby terminal
- b. Using printed instructions
- c. Using instructions on the terminal screen
- d. From the library staff
- e. From a library course or orientation
- f. From a slide/tape/cassette program
- g. By myself without any help

[1] Number in parentheses is the Non-User question number.

Figure 1: Library and Catalog Use Questions

3.2 LIBRARY AND CATALOG USE

3.2.1 Users of the Online Catalog are Frequent Library Users

Overall, 68.2 percent of online catalog users use their libraries at least once a week (Appendix C, page 48). Use is more frequent in academic libraries of all types (Appendix D, page 73); at least 70 percent of academic library respondents use the library at least once a week. In public, state and federal libraries, only 35-45 percent of respondents use their library this frequently. Among state and federal libraries, almost 16 percent of respondents said they were using the library for the first time.

3.2.2 Users of the Online Catalog Consult it Frequently

Users of the online catalog consult it frequently; 21 percent use it every library visit, and over 59 percent use it on most of their visits to the library (Table 6 and Appendix C, page 50). This distribution is characteristic of all types of libraries (Appendix D, page 74). Within the group of non-ARL academic libraries, however, the libraries at the University of Akron, Ohio University (Athens), and the University of Texas at Austin were all marked by high percentages of first-time users (30.7, 14.3 and 20 percent respectively, compared to about 10 percent overall), and the general distribution cannot be presumed to apply to these institutions.

3.2.3 Online Catalog Users are also Users of Card Catalogs

Users of the online catalog are not averse to the card catalog (only about 32 percent use the card catalog "rarely" or "not before today"), but as Table 6 shows, they are more likely to use the computer catalog frequently than the card catalog.

3.2.4 OLC Users are More Frequent Users of the Library and of Other Catalogs than are OLC Non-Users

Not surprisingly, regular users of the library tend to be users of the online catalog, but there is very little difference between the user and non-user populations in library use. However, users of the online catalog are much more likely than non-users to make use of the library's other catalogs (card, book, or microform) on a regular basis. Tables 7 and 8 contrast use of the library and of the card catalog by user and non-user groups.

TABLE 6

Relative Use of Computer and Card Catalogs

Question 49: *I use this computer catalog:*

Question 50: *I use this library's book, card or microfilm catalog:*

	Computer Catalog	Card Catalog
a. Every visit	21.1%	12.4%
b. Most visits	36.9	21.2
c. Occasionally	26.8	34.4
d. Rarely	5.5	21.3
e. Not before today	9.8	10.7

TABLE 7

User and Non-User Library Use

Question 48 (User) and 7 (Non-User): *I come to this library:*

	Proportion of Respondents Who Were: Users	Non-Users
a. Daily	65.0%	35.0%
b. Weekly	71.4%	28.6%
c. Monthly	67.5%	32.5%
d. Four times a year	56.4%	43.6%
e. Once a year	44.4%	55.6%
f. Not before today	46.8%	53.2%

TABLE 8

User and Non-User Other Catalog Use

Question 49 (User) and 8 (Non-User): *I use this library's book, card, or microfilm catalog:*

	Proportion of Respondents Who Were:	
	Users	Non-Users
a. Every visit	71.0%	29.0%
b. Most visits	72.8%	27.2%
c. Occasionally	67.7%	32.3%
d. Rarely	61.7%	38.3%
e. Not before today	52.8%	47.2%

3.2.5 Online Catalog Users are Not Necessarily Users of Other Computers

For about 36 percent of respondents, the online catalog is the first computer system they have ever used, the largest single response category to Question 51. However, an almost equal percentage use some other computer system at least once a week (Appendix C, page 52).

3.2.6 Those with Other Computer Experience Tend to be OLC Users

Even though OLC users are not heavy users of other computer systems, users of the online catalog are more likely than non-users to have experience with another computer system. Over half (50.4 percent) of the non-users have never used a computer system, as opposed to 36.3 percent of users who have never used a system other than the OLC. Table 9 contrasts the computer experience of users and non-users.

TABLE 9

User and Non-User Experience with Other Computer Systems

Question 50 (User) and 9 (Non-User): *I use a computer system other than the library's computer catalog:*

	Proportion of Respondents Who Were: Users	Non-Users
a. Daily	74.8%	25.2%
b. Weekly	71.6%	28.4%
c. Monthly	70.3%	29.7%
d. About 4 times a year	71.4%	28.6%
e. About once a year	66.0%	34.0%
f. Never	57.9%	42.1%

3.2.7 Most Users Discover the Catalog by Seeing It In the Library

One striking finding is that over 63 percent of OLC users first discover the computer catalog by noticing a terminal in the library (Table 10 and Appendix C, page 53). Publicity, library staff, and hearsay (friends and family) rank far behind mere accidental discovery as a means of first finding out about the OLC. Apparently the best form of publicity for the OLC is to put terminals in prominent places where they cannot help but be seen by potential users.

3.2.8 Respondents Learn to Use the Catalog from a Variety of Sources

A considerable majority of users learn to use the catalog from printed instructions (53.3 percent), alone or in combination with some other source of help (Table 11 and Appendix C, page 54). Online instruction and training from library staff run a distant second to printed aids. About 20 percent of users claim to have learned to use the catalog with no assistance at all. Although the distribution in Table 11 is about the same for all types of libraries (Appendix D, page 79), there are statistically important differences among libraries *within* each type, especially with regard to users' relative reliance on

TABLE 10

Means of First Discovering the Computer Catalog

Ranked by Frequency of Response

Question 52: *I first heard about this computer catalog from*:

a.	Noticing a terminal in the library	63.6%
b.	Library tour, orientation or demonstration	10.2
e.	A friend or family member	9.3
f.	Library staff	9.0
d.	A course instructor	4.2
c.	An article or written announcement	3.7

printed aids, online instruction, or library staff. These differences appear to represent institutional differences in the kind and amount of training offered to users. These data should be reviewed library by library, with full awareness of the institutional context of each OLC; reliable generalizations about methods of learning to use the catalog cannot be offered at this time.

3.3 DEMOGRAPHIC CHARACTERISTICS

Questions related to the general demographic characteristics of online catalog users and non-users are displayed in Figure 2.

3.3.1 Online Catalog Users Tend to be Younger than Non-OLC Users

As shown on Page 57 of Appendix C, over 59 percent of online catalog users are under 25 years of age, and only about two percent are 55 or older. The youngest (fourteen and under) and oldest (55-64 years and 65 or older) age groups are more likely to be found in public and state/federal libraries (Appendix D, page 81-82), but the middle age ranges are more-or-less equally distributed across library types. Within the non-ARL academic group, an atypical concentration of older respondents was found at the University of

38

TABLE 11

Methods of Learning to Use the Computer Catalog

Ranked by Frequency of Response[1]

Question 53: *I learned how to use this computer catalog*: (*Mark* ALL *that apply*)

b.	Using printed instructions	53.3%
d.	From the library staff	29.6
c.	Using instructions on the terminal screen	29.0
g.	By myself without any help	19.8
a.	From a friend or someone at a nearby terminal	15.5
e.	From a library course or orientation	6.2
f.	From a slide/tape/cassette program	0.2

[1] Percentages sum to more than 100 due to legitimate multiple responses.

Akron and the University of Texas at Dallas; within other type-of-library groups, age distributions among institutions were roughly identical. There is a general tendency for the likelihood of non-use to increase with age. The youngest group (age 14 and under), drawn primarily from the public library sample, is most likely to use the OLC (87 percent users, 13 percent non-users.) The next most likely users are those in the age range of 25 to 34 years. This group is dominated by upper division and graduate university students. Table 12 contrasts the ages of users and non-users.

3.3.2 Women are More Likely than Men to be Non-Users

Overall, almost 60 percent of online catalog users are male (Table 13 and Appendix C, Page 58). This distribution varies somewhat by type of library (Table 13 and Appendix D, page 83), but in no type of library is the "male majority" less than about 57 percent. In only one of the participating libraries, that of Stephen F. Austin State University, were women respondents in the majority.

54. (*10*)[1] My age group is:

a. 14 and under
b. 15-19 years
c. 20-24 years
d. 25-34 years
e. 35-44 years
f. 45-54 years
g. 55-64 years
h. 65 and over

55. (*11*) I am:

a. Female
b. Male

56. (*12*) Mark your current or highest educational level: (Mark *ONE* only)

a. Grade School or Elementary School
b. High School or Secondary School
c. Some College or University
d. College or University graduate

[1] Number in parentheses is the Non-User question number.

Figure 2: User Characteristics Questions

Women are somewhat less likely to be users of online catalogs than men. While women make up only 40.1 percent of the user population, they comprise 47.9 percent of the non-user group. Men predominate in both samples at 59.9 percent of users and 52.1 percent of non-users. This difference ranges across almost all other sub-categories.

3.3.3 OLC Users Tend to Have More Educational Experience

Ninety percent of respondents claim to have at least some college education (Appendix C, page 59). This distribution varies significantly by type of library, with public library respondents having lower average levels of education than is typical of the other groups; even in public libraries, however, over 72 percent of respondents have at least some college. Notably, almost 73 percent of respondents from state/federal libraries (principally Library of

TABLE 12

Users and Non-Users by Age Group

Question 54 (User) and 10 (Non-User): *My age group is:*

Age Group	*Proportion of Respondents Who Were:* Users	Non-Users
a. 14 and under	87.0%	13.0%
b. 15 - 19 years	67.9%	32.1%
c. 20 - 24 years	64.0%	36.0%
d. 25 - 34 years	69.1%	30.9%
e. 35 - 44 years	66.2%	33.8%
f. 45 - 54 years	54.5%	45.5%
g. 55 - 64 years	43.6%	56.4%
h. 65 and over	39.4%	60.6%

TABLE 13

Sex of Online Catalog Users, Overall and by Type of Library

Question 55: *I am: (a) Female (b) Male*

	Female	Male
All Libraries	40.1%	59.9%
ARL Libraries	39.1	60.9
Other Academic Libraries	42.8	57.2
Community Colleges	33.6	66.4
Public Libraries	43.1	56.9
State/Federal Libraries	35.2	64.8

Congress) said they were college graduates, as contrasted with 44 percent overall (Appendix D, page 84). Users are slightly more likely to be college graduates than are non-users. Table 14 contrasts the educational level of users and non-users.

TABLE 14

User and Non-User Educational Levels

Question 56 (User) and 12 (Non-User): *Mark your current or highest educational level:*

	Proportion of Respondents Who Were:	
	Users	Non-Users
a. Grade School or Elementary School	73.3%	26.7%
b. High School or Secondary School	67.7%	32.3%
c. Some College or University	62.1%	37.9%
d. College or University Graduate	68.7%	31.3%

3.4 CHARACTERISTICS OF ACADEMIC RESPONDENTS

The questions asked only of respondents at college and university libraries are displayed in Figure 3.

3.4.1 Academic Users are from All Disciplines

Table 15 shows the academic disciplines reported by the 4,856 respondents who completed the questionnaire at college and university libraries (see also Appendix C, page 60). Although the three most frequently mentioned academic areas, Arts and Humanities, Social Sciences, and Business and Management, represent 57 percent of all respondents, the user population is drawn from all disciplines. Although institutional differences are evident in the data, this distribution shows no significant statistical difference among the

57. (*13*)[1] The category that best describes my academic area is: (Mark *ONE* only)

a. Arts and Humanities
b. Physical/Biological Sciences
c. Social Sciences
d. Business/Management
e. Education
f. Engineering
g. Medical/Health Sciences
h. Law
i. Major not declared
j. Interdisciplinary

58. (*14*) The main focus of my academic work at the present time is: (Mark *ALL* that apply)

a. Course Work
b. Teaching
c. Research

59. (*15*) My present affiliation with this college or university is:

a. Freshman/Sophomore
b. Junior/Senior
c. Graduate - masters level
d. Graduate - doctoral level
e. Graduate - professional school
f. Faculty
g. Staff
h. Other

[1] Number in parentheses is the Non-User question number.

Figure 3: Questions Regarding Characteristics of Academic Users

types of academic libraries, or among the individual libraries within each type.

TABLE 15

Academic Disciplines of Users

Ranked by Frequency of Response

Question 57: *The category that best describes my academic area is:*[1]

a.	Arts and Humanities	26.1%
c.	Social Sciences	17.6
d.	Business/Management	13.3
f.	Engineering	11.9
b.	Physical/Biological Sciences	11.6
g.	Medical/Health Sciences	5.6
e.	Education	5.5
i.	Major not declared	3.4
j.	Interdisciplinary	3.1
h.	Law	2.0

[1] Answered only at college and university sites.

3.4.2 *Online Catalog Use Is Related to Academic Discipline*

For academic libraries, those in the Arts and Humanities, "Interdisciplinary" subjects, and Social Sciences are most likely to be users of the OLC, while those in Business/Management, Medical/Health Sciences, Law and "undeclared" majors are more likely to be non-users. Those in the Physical and Biological Sciences and Education are split almost evenly between users and non-users. This division by discipline can probably be explained by considering which disciplines derive their primary research materials from monographs (the major contents of OLCs) and which from journal literature, or alternate indexes. Table 16 contrasts the academic disciplines of users and non-users.

One reviewer of an early draft of this paper, referring to our findings on the relation of sex to OLC use, suggested that the disciplinary differences in OLC use might be caused by sex differences in the composition of the various disciplines. The evidence does not support this hypothesis. While there are larger-than-average numbers of women in the Health Sciences and among undeclared majors (women composed 39 percent of respondents in academic libraries), two groups least likely to use the OLC, there are also larger-than-average numbers of women in the arts, humanities, social sciences, and interdisciplinary majors, the groups most likely to use the OLC. While the sex difference noted previously appears to prevail in the academic library group (although perhaps to a lesser extent), it obviously is not the chief cause of disciplinary differences in use of the online catalog.

TABLE 16

User and Non-User Academic Disciplines

Question 57 (User) and 13 (Non-User): *The category that best describes my academic area is:*[1]

	Proportion of Respondents Who Were: Users	Non-Users
a. Arts and Humanities	77.5%	22.5%
b. Physical/Biological Sciences	66.6	33.4
c. Social Sciences	74.0	26.0
d. Business/Management	55.0	45.0
e. Education	68.6	31.4
f. Engineering	61.3	38.7
g. Medical/Health Sciences	57.9	42.1
h. Law	62.5	37.5
i. Major not declared	57.4	42.6
j. Interdisciplinary	74.3	25.7

[1] Answered only at college and university sites.

3.4.3 *Most Academic Use of the Online Catalog is Course-Related*

About 74 percent of academic library users said that their main focus of academic work at the time was course work, either alone or in some combination with teaching and research. Almost 38 percent indicated that their present academic activity included research, and only about 9.5 percent mentioned teaching among their chief activities (Appendix C, page 62). These distributions are essentially the same for all three types of academic libraries, but within the ARL group there were significant differences in the distribution of users claiming to be principally involved in research, ranging from percentages as high as 85 and 86 percent at Northwestern, Ohio State and University of Texas at Austin, to a low of 42.6 percent at the University of California campuses.

Overall, undergraduate students accounted for almost 60 percent of the respondents in the academic group (Table 17 and Appendix C, page 64). Faculty and non-library staff together accounted for less than seven percent of users. This distribution did not vary significantly among the three types of academic libraries. *Within* the non-ARL colleges and universities, however, there were some significant differences in the distributions, with the University of Akron and the University of Texas at Austin marked by unusually high proportions of faculty (16-22 percent), doctoral students (10-20 percent) and masters students (23-26 percent). At these three institutions, undergraduates were not a majority of the respondents.

3.4.4 *Respondents with Course-Related Demands are More Likely to be Non-Users*

Given that most use of OLCs is course-related, it is somewhat paradoxical that users are more likely to be involved in research or teaching than non-users. Table 18 contrasts the main focus of academic work of users and non-users in academic libraries. The paradox, of course, is simply a matter of numbers; even though library patrons with course-related needs are less likely to use the OLC, this kind of demand far outnumbers the research and teaching uses of the library in most academic environments.

Graduate students, faculty, and staff are more likely to be users, while undergraduates, and graduate students in professional schools, are more likely to be non-users. Table 19 contrasts the university affiliation of users and non-users in academic libraries.

TABLE 17

Academic Status of Respondents to the User Questionnaire

Ranked by Frequency of Response

Question 59: *My present affiliation with this college or university is*:[1]

b.	Junior/Senior	34.1%
a.	Freshman/Sophomore	25.7
c.	Graduate - masters level	13.4
d.	Graduate - doctoral level	9.7
h.	Other	8.0
f.	Faculty	4.0
g.	Staff	2.8
e.	Graduate - professional school	2.3

[1] Answered only at college and university sites.

3.5 WHY DON'T PEOPLE USE THE ONLINE CATALOG?

Questions 1 to 3 and 5 of the Non-User Questionnaire address the reasons why respondents have not used the online catalog. The text of these questions is presented in Figure 4, and basic statistical reports are in Appendices E and F.

3.5.1 Most Non-Users Have Not Had Time to Obtain Training in OLC Use

When non-users were asked why they had not used the online catalog, the most popular response was "I have not taken training sessions on how to use it" (44.7 percent), followed by "I have not had time to learn to use it" (41.0 percent). As Table 20 shows, "fear of computers" was not an important reason for non-use: only 8.7 percent of respondents gave "I do not like to use computers" as a reason.

The multiple-response characteristics of Non-User Question 1, and the relationship of this question to others in the questionnaire, are of some interest

TABLE 18

User and Non-User Focus of Academic Work

Question 58 (User) and 14 (Non-User): *The main focus of my academic work at the present time is: (Mark* ALL *that apply)*[1]

	Proportion of Respondents Who Were: Users	Non-Users
a. Course Work	63.8%	36.3%
b. Teaching	78.4%	21.6%
c. Research	77.6%	22.4%

[1] Answered only at college and university sites.

in exploring reasons for not using the online catalog. We will return to these matters later in this section, after discussing the other items in Figure 4 individually.

3.5.2 Most Non-Users Believe It Will Take Less than 30 Minutes to Learn to Use the OLC

As Table 21 shows, a majority of respondents (63.7 percent) believe that learning to use the online catalog takes 30 minutes or less, and over one-third (37.8 percent) think it will take less than 15 minutes.

3.5.3 Most Non-Users Think the OLC Is Easy to Learn to Use

A majority of non-users believe that they can learn to use the online catalog rapidly. An even larger percentage (82.4 percent) think it can be learned easily (Table 22). Most notably, only 1.5 percent of responding non-users believe that it would be very difficult to learn to use the catalog.

TABLE 19

User and Non-User University Affiliation

Question 59 (User) and 15 (Non-User): *My present affiliation with this college or university is:*[1]

	Proportion of Respondents Who Were:	
	Users	Non-Users
a. Freshman/Sophomore	59.3%	40.7%
b. Junior/Senior	64.9	35.1
c. Graduate - masters level	73.7	26.3
d. Graduate - doctoral level	78.1	21.9
e. Graduate - professional school	61.5	38.5
f. Faculty	83.6	16.4
g. Staff	84.7	15.3
h. Other	63.8	36.2

[1] Answered only at college and university sites.

3.5.4 *Three-Quarters of Non-Users Say They are Likely to Use the OLC*

Almost three-fourths of non-user respondents (74.6 percent) said they were likely to use the computer catalog in the future, and over one-third (34 percent) believed they were very likely to use it (Appendix E, page 18).

3.5.5 *Why Don't People Use the Online Catalog? The Question Revisited*

From the evidence presented so far, the portrait of the non-user of online catalogs seems simple and straightforward: most non-users think the catalog can be learned quickly (Table 21) and easily (Table 22), and most believe they will use the OLC in the future (Appendix E, page 18). The main obstacles to use seem to be awareness of the catalog and the availability of training (Table 20).

1. I have not used the computer catalog up to now because:
   (Mark *ALL* that apply)

   a. I do not like to use computers
   b. I did not know there was a computer catalog
   c. I do not know where it is
   d. I have not had time to learn to use it
   e. I have not taken training sessions on how to use it
   f. There has not been any staff at the terminals to assist me in using it
   g. The terminals were all in use when I wanted to use it
   h. I have not needed to use any library catalog recently
   i. The card catalog is easier to use
   j. The card catalog contains more of the information I need
   k. I am a visitor or infrequent user of this library

2. How much time do you think it takes to learn to use the computer catalog?

   a. A day or more
   b. Between 1/2 of a day and a day
   c. Between an hour and 1/2 of a day
   d. Between 30 minutes and an hour
   e. Between 15 minutes and 30 minutes
   f. 15 minutes or less

3. How difficult or easy do you think it would be to learn to use the computer catalog?

   a. Very difficult
   b. Somewhat difficult
   c. Somewhat easy
   d. Very easy

5. How likely are you to use the computer catalog in the future?:

   a. Very likely
   b. Somewhat likely
   c. Somewhat unlikely
   d. Very unlikely

Figure 4: Questions About Reasons for Not Using the Computer Catalog (Non-User Questionnaire)

TABLE 20

Reasons for Never Having Used the Computer Catalog

Ranked by Frequency of Response[1]

Non-User Question 1: *I have not used the computer catalog up to now because*:

e.	I have not taken training sessions on how to use it	44.7%
d.	I have not had time to learn to use it	41.0
h.	I have not needed to use any library catalog recently	39.8
b.	I did not know there was a computer catalog	30.0
k.	I am a visitor or infrequent user of this library	28.5
c.	I do not know where it is	18.3
i.	The card catalog is easier to use	15.7
a.	I do not like to use computers	8.7
f.	There has not been any staff at the terminals to assist me in using it	8.0
j.	The card catalog contains more of the information I need	4.3
g.	The terminals were all in use when I wanted to use it	3.4

[1] Percentages sum to more than 100 due to legitimate multiple responses.

Upon closer inspection, this image contains some curious inconsistencies. For example, of those respondents who said that they had no time to learn to use it (Question 1d, Figure 4), 29.2 percent believed it would take 15 minutes or less to learn, and 55 percent thought the task required 30 minutes or less (Question 2, Figure 4). One must question whether enhanced publicity or training could hope to succeed with patrons who are unable or unwilling to expend as little as 15 minutes in learning to use the OLC.

Let's look again at the group of respondents who mentioned training problems--either they had not taken training (Question 1e) or hadn't had time to learn (Question 1d). Recall that Question 1 was a multiple-response question: respondents could check all categories that applied. Of all respondents who checked either 1d or 1e or both:

TABLE 21

Non-users' Estimates of Time Needed to Learn to Use the OLC

Ranked by Frequency of Response

Non-user Question 2: *How much time do you think it takes to learn to use the computer catalog?*

f. 15 minutes or less	37.8%
e. Between 15 minutes and 30 minutes	25.9
d. Between 30 minutes and an hour	20.4
c. Between an hour and 1/2 of a day	8.0
b. Between 1/2 of a day and a day	4.0
a. A day or more	3.8

TABLE 22

Non-users' Estimates of Difficulty of Learning to Use the OLC

Non-user Question 3: *How difficult or easy do you think it would be to learn to use the computer catalog?*

a. Very Difficult	1.5%
b. Somewhat Difficult	16.0
c. Somewhat Easy	46.2
d. Very Easy	36.2

- 37 percent *also* indicated that they were not aware of the OLC (Questions 1b or 1c or both)

- 37 percent *also* indicated that they have not needed to use a catalog of any kind recently (Question 1h)

- 27 percent *also* showed a predisposition against the OLC--either a preference for the card catalog (Questions 1i and j) or a dislike of computers (Question 1a)

- 26 percent *also* were visitors or infrequent users (Question 1k).

- 15 percent *also* experienced a "library support" problem--either terminals or library staff were not available when needed (Questions 1f and g).

One must question whether responses to Questions 1d or e, regarding training, are meaningful for people who rarely use the library, didn't know about the catalog, prefer the card catalog, don't like computers, don't use catalogs, or can't get access to a terminal. We could easily be misled by the findings from Question 1 that 59.5 percent checked 1b or c, suggesting that training programs may be important. However, only 12.6 percent checked b or c *and nothing else,* suggesting that other barriers to use may be of equal or greater importance than training problems.

To illustrate the point, we have manipulated the responses to Question 1 in two ways. First, we have condensed the categories to make interpretation more manageable. These categories are derived principally from logical consideration of the question, but their definitions are supported by correlation and factor analyses that will not be discussed here. The categories are:

A) *Learning to use the catalog.* Includes positive responses to 1c ("have not had time to learn") and/or 1d ("have not taken training sessions").

B) *Do not use catalogs.* Includes positive responses to 1h ("have not needed to use a catalog recently").

C) *Predisposed against the OLC.* Includes positive responses to 1a ("do not like computers"), 1i ("card catalog easier to use") and 1j ("card catalog contains more of the information I need").

D) *Not aware of the catalog.* Includes positive responses to 1b ("not aware of catalog") and/or 1c ("do not know where it is").

E) *Infrequent library user.* Includes positive responses to 1k ("visitor or infrequent library user").

F) *Library support problem.* Includes positive responses to 1f ("No staff at terminals to assist") and 1g ("terminals all in use").

The second adjustment was to modify the responses in these new categories in the light of other responses, to eliminate what we felt (admittedly, somewhat arbitrarily) to be mutually exclusive categories. These adjustments were:

1. If a respondent answered positively in *any* of the categories B to F, a negative response to category A (learning) was assumed. We postulate that, if any of the other conditions obtained, it was unlikely that the respondent would take advantage of opportunities to learn to use the catalog, or that learning opportunities would not be the chief reason for non-use.

2. If a respondent answered positively to category E (infrequent user), then a negative response to category D (awareness) was assumed. We postulate that new or infrequent users are unlikely to be aware of the OLC, and that the multiple response would be redundant.

3. If a respondent answered positively to category C (predisposed against the OLC), a negative response was assumed for category F (library support). If a library patron who had not used the OLC had an *a priori* belief that the card catalog was better, or disliked computers, it seemed unlikely that access to terminals or staff help would be a significant additional obstacle to use.

Table 23 shows the results of imposing these adjustments on the responses to Question 1. This table suggests that the chief reasons for non-use are that respondents simply do not use library catalogs or the library itself very often (39.8 percent and 28.5 percent respectively). Following these is the group with an *a priori* bias against the OLC (22.6 percent), and then the group of patrons who were not aware of the catalog (21.2 percent). As noted previously, training problems taken by themselves account for only 12.6 percent of the responses. Library support problems represent 6.6 percent of responses. It is possible, then, that improved training would reach only 12 or 13 percent of non-users. Two or three times as many non-users simply do not use the library or the catalog, and are unlikely to be swayed by invitations to learn to use it. Finally, a "hard core" 23 percent either prefer the card catalog *a priori*, or dislike computers, and perhaps cannot be reached at all.

Even within these revised categories, we find some curious phenomena:

- Over 27 percent of those who "do not use catalogs" are also infrequent library users, and conversely, 38 percent of infrequent library users are also infrequent catalog users, suggesting that these two categories may be largely redundant.

- Almost 30 percent of those who were predisposed against the OLC are also infrequent catalog users. Remembering that the group of predisposed users is composed primarily of those who prefer the card catalog

TABLE 23

Reasons for Never Having Used the Computer Catalog, Revised

Ranked by Frequency of Response[1]

B.	Do not use catalogs	39.8%
E.	Infrequent user of library or catalog	28.5
C.	Predisposed against the computer catalog	22.6
D.	Not aware of the computer catalog	21.2
A.	Have not learned to use the computer catalog	12.6
F.	Had problems with library support	6.6

[1] Percentages sum to more than 100 due to legitimate multiple responses. Categories are defined in section 3.5.5.

> (as Table 20 shows, only about 8 percent of all respondents raacted unfavorably to the computer *per se*), the fact that many such respondents are not catalog users *at all* might cause us to question the validity of their predisposition or the usefulness of this category.

One objective of the foregoing discussion was to highlight some of the problems in interpreting responses to Non-user Question 1. *The responses to this question are extremely ambiguous, and the results should be interpreted with care.*

The other objective was to draw as defensible a portrait of the non-user as possible, given the problems recounted above. For us, the picture of the non-user that emerges from this analysis is of a person who is not a frequent user of the library or its catalogs. From this it may follow that strategies to increase acceptance of the online catalog should not focus on the catalog itself, but rather use and users of the library as a whole.

This emphasis may explain what otherwise might remain a curious paradox: that "typical" non-users, characterized as people who use neither libraries nor catalogs with any frequency, nonetheless tend to characterize the OLC as quick and easy to learn, and claim to be likely to use it in the future. The implication here is that, if one can promote use of the library and its bibliographic tools, the online catalog may well be able to promote itself.

There is another potentially interesting interpretation of this paradox; that the non-user, unsure of how to use a computer catalog and perhaps even a bit fearful of it, nonetheless is reluctant to admit the fact. This possibility will be discussed further later in this report.

Chapter 4

CHARACTERISTICS OF ONLINE CATALOG SEARCHES

4.1 GENERAL

The first four questions on the User Questionnaire deal with characteristics of the search just completed by the respondent:

- The kind and amount of *bibliographic information* brought to the search
- The *bibliographic task* to be performed, e.g., to find a known item, perform a subject search, or verify bibliographic information
- The *search method* used, as reflected by the bibliographic access points used in the search (subject, author, etc.)
- The *application*, the reason for which the search was performed.

Questions about search characteristics in the User Questionnaire are displayed in Figure 5.

4.2 BIBLIOGRAPHIC INFORMATION

4.2.1 Most Users Come with Subject-Related Information

As Table 24 shows, most users come to the online catalog search with information about topics or subjects: 44.4 percent with "complete subject headings" and 28.4 percent with "a topic word or words" (also see Appendix C, page 17).

User Question 1 (Figure 5) attempts to deal simultaneously with two aspects of users' bibliographic information: the *kind* of information and the *quantity* of information available to the user. It is evident from Table 24 that most users believe they have reasonably complete information about the materials they want; the "part information" responses (1b, d and h) are overshadowed by the "complete information" responses to this question. For the time being, then, we will set aside the aspect dealing with the quantity of information,

1. I came to this computer search with: (Mark *ALL* that apply)

a. A complete author's name	e. A topic word or words
b. Part of an author's name	f. A subject heading or headings
c. A complete title	g. A complete call number
d. Part of a title	h. Part of a call number

2. By searching this computer catalog I was trying to find: (Mark *ALL* that apply)

a. A specific book, journal or magazine
b. Books, journals or magazines on a topic or subject
c. Books by a specific author
d. Information such as publisher, date, spelling of a name etc.
e. If a book that I know the library has is available for my use
f. Another library that has a book, journal or magazine that I want

3. I searched for what I wanted by: (Mark *ALL* that apply)

a. A complete author's name	e. A topic word or words
b. Part of an author's name	f. A subject heading or headings
c. A complete title	g. A complete call number
d. Part of a title	h. Part of a call number

4. I need this information for: (Mark *ALL* that apply)

a. Recreational uses
b. Making or fixing something
c. My work or job
d. Personal interest
e. A hobby
f. Class or course reading
g. A course paper or report
h. A thesis or dissertation
i. Writing for publication
j. Teaching or planning a course
k. Keeping up on a topic or subject

Figure 5: Questions Regarding Characteristics of the Online Catalog Search

TABLE 24

Bibliographic Information Brought to Online Catalog Searches

Ranked by Frequency of Response[1]

Question 1; *I came to this computer search with*: (*Mark* ALL *that apply*)

f.	A subject heading or headings	44.4%
a.	A complete author's name	41.9
c.	A complete title	39.3
e.	A topic word or words	28.7
b.	Part of an author's name	12.7
d.	Part of a title	10.9
g.	A complete call number	5.0
h.	Part of a call number	1.1

[1] Percentages sum to more than 100 due to legitimate multiple responses.

and inspect only the *kind* of information brought by users. In the process, we will also set aside investigation of the relatively small proportion of users (6.1 percent) who possessed call number information, and concentrate only on author, title, and subject searches.

Table 25 shows the responses to Question 1 reclassified into Author, Title, and Subject categories. Note that this information is not constructed from the information in Table 24, but is computed from the raw questionnaire responses in order to fully account for multiple responses.

Table 25 shows that more than one-third of users come to the online catalog with *only* subject information. The next-ranking category, users with author-title information, is considerably smaller.

TABLE 25

Classes of Information Brought to the Search by Users

Ranked by Frequency of Response

Category of Information[1]	*Percentage*
Subject	36.2%
Author-Title	21.6
Author-Title-Subject	11.9
Author	10.8
Title	9.0
Author-Subject	5.7
Title-Subject	4.8

[1] Derived from User Question 1 (Figure 5). Users who came *only* with call number information are excluded.

4.2.2 About Forty Percent of Users Bring Only "Known Item" Information

Another way to look at the importance of subject information in online catalog use is to differentiate between users who come only with information about authors and titles (which we will refer to here as "known item" information, recognizing that we include tasks of the "any book by a specific author" category under this label) and users who come with some topical information as well. Table 26 reveals this dichotomy, and shows that almost 60 percent of users bring a topical interest to their search, and that about 40 percent bring only "known-item" information.

TABLE 26

"Known Item" and Subject Information Brought to the Search by Users

Category of Information[1]		
Author	10.8	
Title	9.0	
Author-Title	21.6	
Subtotal, Known Items		*41.4%*
Subject	36.2	
Author-Subject	5.7	
Title-Subject	4.8	
Author-Title-Subject	11.9	
Subtotal, Subject Information		*58.6%*

[1] Derived from User Question 1 (Figure 5). Users who came *only* with call number information are excluded.

4.2.3 Many Users Come with More than One Kind of Information

There is another interesting contrast between users bringing only one element of information to the search and users bringing more than one. Table 27 shows that 56 percent of users come with *only* author or title or subject information, while the remaining 44 percent come with more than one item of data. Even if we (perhaps correctly) assume that users making author-title searches are in possession of "one item" of information about a desired known item, there remain about 22 percent of users who come with some unspecified (and perhaps complex) mix of author, title and subject information.

TABLE 27

Number of Information Elements Brought to the Search by Users

Category of Information[1]		
Author	10.8%	
Title	9.0	
Subject	36.2	
Subtotal, Single Element		*56.0%*
Author-Title	21.6	
Author-Subject	5.7	
Title-Subject	4.8	
Author-Title-Subject	11.9	
Subtotal, Multiple Elements		*44.0%*

[1] Derived from User Question 1 (Figure 5). Users who came *only* with call number information are excluded.

4.3 BIBLIOGRAPHIC TASKS

4.3.1 Most Users are Looking for Books on A Topic

Table 28 shows that most users are seeking books on a topic, followed closely by users seeking specific ("known") items. With much less frequency, users conduct searches for an author's multiple works, or seek book availability information. There is little manifest demand for using the catalog to find items in other libraries, but it should be pointed out that only two or three of the online systems in this study include records for more than one library systems. There is limited interest in the display of complete and detailed bibliographic records; only about 5 percent of users come to the catalog to obtain or verify spedific bibliographic data.

TABLE 28

Bibliographic Tasks for which the Online Catalog is Used

Ranked by Frequency of Response[1]

Question 2: *By searching this computer catalog I was trying to find*: (*Mark* ALL *that apply*)

b.	Books, journals or magazines on a topic or subject	53.44%
a.	A specific book, journal or magazine	50.11
c.	Books by a specific author	23.66
e.	If a book that I know the library has is available for my use	16.77
f.	Another library that has a book, journal or magazine that I want	7.44
d.	Information such as publisher, date, spelling of a name etc.	5.33

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[1] Percentages sum to more than 100 due to legitimate multiple responses.

4.4 *SEARCH METHODS*

4.4.1 *Most Users Search by Subject or Topic*

Table 29 shows that most users use subject headings or topic words in their search: 43 percent "searched by subject headings" and 29.9 percent "searched by topic word or words" (also see Appendix C, page 19).

As we did with bibliographic information in a previous section, we can separate out from Question 3 the issues of the kind and amount of information used in the search. Table 30 shows the results when search methods are classified into Author, Title and Subject categories.

Once again, subject searching is most common in the systems studied, constituting over one-third of all searches.

TABLE 29

Methods of Searching Used with the Online Catalog

Ranked by Frequency of Response[1]

Question 3: *I searched for what I wanted by*: (*Mark* ALL *that apply*)

f.	A subject heading or headings	43.4%
a.	A complete author's name	38.0
c.	A complete title	35.5
e.	A topic word or words	29.9
b.	Part of an author's name	15.0
d.	Part of a title	14.2
g.	A complete call number	4.4
h.	Part of a call number	0.8

[1] Percentages sum to more than 100 due to legitimate multiple responses.

4.4.2 Almost Sixty Percent of Online Catalog Searches Involve Subjects

As Table 31 shows, 56.5 percent of online catalog searches involve subject searching; 43.6 percent are "known item" searches. However, this distribution includes a few systems that do not provide access to subject indices. When data from these systems are removed, the proportion of subject searches increases to more than 58 percent, as shown in Table 32.

4.4.3 Multiple Access Points are Used in About Thirty Percent of Searches

As Table 33 shows, about 60 percent of reported searches involve use of only one generic kind of heading index--either author, title, or subject.[8] Almost

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[8] Various systems define a "heading" in various ways, defining an index to include certain specific MARC fields and subfields, for example. We recognize the wide differences among systems in defining and naming searchable indices; rather than accounting for all the permutations, we will simply re-

TABLE 30

Types of Searches Conducted on Online Catalogs

Ranked by Frequency of Response

Type of Search[1]	*Percentage*
Subject	34.1%
Author-Title	17.5
Author	13.8
Title	12.3
Author-Title-Subject	10.1
Author-Subject	6.5
Title-Subject	5.8

[1] Derived from User Question 3 (Figure 5). Users who conducted *only* call number searches are excluded.

40 percent of searches required access to more than one index; it is not possible to determine from the questionnaire data whether the several indices were searched sequentially or simultaneously (by use of Boolean logic, in those systems that offer this feature). Even if we remove "author-title" searches from the multiple-index class in recognition of those systems that maintain separate author-title heading indices, about 22 percent of online catalog searches access more than one index.

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fer to them in the terms we used in the questionnaire: author, title and subject.

TABLE 31

"Known Item" and Subject Searches in Online Catalogs

Type of Search[1]		
Author	13.8%	
Title	12.3	
Author-Title	17.5	
Subtotal, Known Items		*43.6%*
Subject	34.1	
Author-Subject	6.5	
Title-Subject	5.8	
Author-Title-Subject	10.1	
Subtotal, Subject Information		*56.5%*

[1] Derived from User Question 3 (Figure 5). Users who conducted *only* call number searches are excluded.

4.5 APPLICATIONS

4.5.1 Most Users Need Information for Classes or Personal Interest

In Table 34 we see that most users search the online catalog to find materials for class reading or papers or for personal interest. A second tier of responses is associated with vocational or recreational uses (work or job, "keeping up" on a topic, or recreation).

TABLE 32

"Known Item" and Subject Searches in Catalogs with Subject Search Capability

Type of Search[1]		
Author	13.6%	
Title	12.0	
Author-Title	15.6	
Subtotal, Known Items		*41.2%*
Subject	35.5	
Author-Subject	6.8	
Title-Subject	6.0	
Author-Title-Subject	10.5	
Subtotal, Subject Information		*58.8%*

[1] Derived from User Question 3 (Figure 5). Users who conducted *only* call number searches are excluded.

4.6 ON THE RELATIONSHIP BETWEEN BIBLIOGRAPHIC INFORMATION AND SEARCH METHOD

Table 35 compares the search information brought by users (Table 25) and the methods used by them (Table 30). In each category, the larger proportion is italicized for emphasis. There are noticeable differences in the two distributions. In Tables 36 and 38, we compare the information brought and the information used in terms of "known item" vs. subject searching and in terms of the number of information items (or access points) involved.

Although 41 percent of users come to the search with only "know item" information, almost 44 percent use only "known item" access points in their search (Table 36). However, when we remove the responses for systems that do not provide subject searching, the patterns of information brought and the information used match more closely (Table 37). This offers some confirmation for

TABLE 33

Number of Access Points Used in Online Catalog Searches

Type of Search[1]		
Author	13.8%	
Title	12.3	
Subject	34.1	
Subtotal, Single Element		*60.2%*
Author-Title	17.5	
Author-Subject	6.5	
Title-Subject	5.8	
Author-Title-Subject	10.1	
Subtotal, Multiple Elements		*39.9%*

[1] Derived from User Question 3 (Figure 5). Users who conducted *only* call number searches are excluded.

the belief that, in systems without subject access or with limited subject access (including card catalogs), some author and title searches may in fact be "disguised" subject searches.

In Table 38, we see that although 56 percent of users bring information for only single access points, over 60 percent *search* only a single access point. Although the difference is not large, the gap is over twice as great that that between known item and subject information brought and used. The implication is that *users do not use as much information as they bring to the search*. This apparent phenomenon may be explained by either of two reasons:

- Users are able to complete their online catalog searches successfully with only part of the information they bring to the search; or

TABLE 34

Reasons for Conducting the Online Catalog Search

Ranked by Frequency of Response[1]

Question 4: *I need this information for*: (*Mark* ALL *that apply*)

g.	A course paper or report	38.6%
d.	Personal interest	29.9
f.	Class or course reading	28.7
c.	My work or job	16.9
a.	Recreational uses	16.8
k.	Keeping up on a topic or subject	14.2
h.	A thesis or dissertation	9.7
e.	A hobby	7.7
i.	Writing for publication	7.2
j.	Teaching or planning a course	4.6
b.	Making or fixing something	3.2

[1] Percentages sum to more than 100 due to legitimate multiple responses.

- Present online catalog systems make it difficult for users to apply all the information they bring to the search, either by failing to provide the necessary access points and features, or by failing to communicate to users how those features are used.

TABLE 35

Information Brought to and Used in the Catalog Search

Category[1]	*Information Brought*[2]	*Access Points Used*[3]
Subject	*36.2%*	34.1%
Author-Title	*21.6*	17.5
Author-Title-Subject	*11.9*	10.1
Author	10.8	*13.8*
Title	9.0	*12.3*
Author-Subject	5.7	*6.5*
Title-Subject	4.8	*5.8*
TOTAL[4]	100.0	100.1

[1] Derived from User Questions 1 and 3 (Figure 5). Users who came with or searched by call number information *only* are excluded. [2] From Table 25. [3] From Table 29. [4] Totals may deviate from 100 percent due to rounding.

TABLE 36

"Known Item" and Subject Information Brought to and Used in the Search

Category[1]	*Information Brought*[2]	*Information Used*[3]
Author	10.8	13.8
Title	9.0	12.3
Author-Title	21.6	17.5
Subtotal, Known Items	*41.4%*	*43.6%*
Subject	36.2	34.1
Author-Subject	5.7	6.5
Title-Subject	4.8	5.8
Author-Title-Subject	11.9	10.0
Subtotal, Subject Information	*58.6%*	*56.5%*

[1] Derived from User Questions 1 and 3 (Figure 5). Users who came with or searched by call number information *only* are excluded.
[2] From Table 26. [3] From Table 31.

TABLE 37

"Known Item" and Subject Information for Systems with Subject Search Capability

Category[1]	*Information Brought*[2]		*Information Used*[3]	
Author	10.6		13.6	
Title	8.8		12.0	
Author-Title	20.1		15.6	
Subtotal, Known Items		*39.5%*		*41.2%*
Subject	37.6		35.5	
Author-Subject	5.9		6.8	
Title-Subject	4.9		6.0	
Author-Title-Subject	12.0		10.5	
Subtotal, Subject Information		*60.4%*		*58.8%*

[1] Derived from User Questions 1 and 3 (Figure 5). Users who came with or searched by call number information *only* are excluded. [2] Excluding systems without subject searching capability. [3] From Table 32.

TABLE 38

Number of Information Elements Brought to and Used in the Search

Category[1]	*Information Brought*[2]		*Information Used*[3]	
Author	10.8		13.8	
Title	9.0		12.3	
Subject	36.2		34.1	
Subtotal, Single Element		*56.0%*		*60.2%*
Author-Title	21.6		17.5	
Author-Subject	5.7		6.5	
Title-Subject	4.8		5.8	
Author-Title-Subject	11.9		10.0	
Subtotal, Multiple Elements		*44.0%*		*39.8%*

[1] Derived from User Questions 1 and 3 (Figure 5). Users who came with or searched by call number information *only* are excluded.
[2] From Table 27. [3] From Table 33.

Chapter 5

CATALOG FEATURES AND PROBLEMS

This chapter describes the system and database features of the 15 online catalogs participating in the study, and reports on users' perceptions of their problems in using system features.

5.1 SYSTEM FEATURES AND CAPABILITIES

The libraries participating in this study have incorporated a remarkable diversity of features into their online catalogs. This chapter briefly describes the features available and examines the problems encountered by users in using them. An important study by Hildreth, unrelated to this project, examines features of several online catalogs in great depth, and includes some of the OLC systems participating in this study.[9]

So that we could adjust for system differences in making aggregate comparisons, we asked all participants in the study to complete a *Computer System Profile*, the text of which is in Appendix J. Figure 6 shows the code letters for the participating systems, which will be used later in this presentation. Figure 7 is a list of specific features about which information was requested in the Computer System Profile, with code labels for those features. Table 39 is a summary of the features offered by the 15 participating systems.

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[9] Charles Hildreth, *Online Public Access Catalogs: The User Interface*, (Dublin, Ohio: OCLC, Inc., 1982).

Code	System Name
A	OCLC
B	RLIN (Research Libraries Information System)
C	NOTIS (Northwestern University)
D	Dartmouth University
E	Maggie's Place (Pike's Peak Regional Library System)
F	Total Library System (Claremont Colleges)
G	CLSI
H	Dataphase
J	MULS (Mankato State University)
K	ULYSIS (Universal Library Systems)
L	MUMS-SCORPIO (Library of Congress)
M	MELVYL (University of California)
N	LCS (Ohio State University)
P	Dallas Public Library
Q	Syracuse University

Figure 6: Participating Online Catalog Systems

5.2 REPRESENTATION OF LIBRARY HOLDINGS IN OLC'S

Table 40 shows the types of holdings in the online catalogs of participating libraries. The libraries are separated into five groups: ARL, Other Academic, Community College, Public, and State and Federal.[18] Within each group the table shows how many individual libraries have all, some, or none of various types of materials in their online catalogs. Only two of the participating libraries have no alternative catalog available to users, Iowa City Public Library and Ohio State University Library.

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[18] See Table 1 for the specific libraries belonging to each group.

OPERATIONAL CONTROL

SELFUNC	Selection of function (Search, circulation, etc.)
DISRUPT	Interruption of online output
STACKCOM	Command stacking/multiple commands
BCKSPACE	Correct keying errors before command input (back space)

OUTPUT CONTROL

SELDISP	Can user select preferred display format? (yes or no)
DISPB_F	Display forward and back
OLPRINT	Hard copy printed results available
SORT	Sort capability

INFORMATION AND INSTRUCTION

OLINSTR	Instruction or assistance imbedded in dialogue
HELP	Separate HELP displays available on request
THESAUR	Related terms, index, or thesaurus available online

SEARCH FORMULATION AND CONTROL

DATELIM	Expand or limit results by date
LANGLIM	Expand or limit results by language
TYPELIM	Expand or limit results by type of material
OTHERLIM	Expand or limit results by ___________ (please specify)
FREETEXT	Free text term or keyword searching available
BOOLEAN	Use of Boolean operators (and, or, not)
TRUNCATE	Ability to use truncated search terms
SAVESETS	Ability to create and save sets
SELMODE	Ability to select or change search mode

TYPE OF COMMAND ENTRY LANGUAGE

COMMAND	Formal command language
MENU	Menu selection
OTHERMDE	Other ____________________

Figure 7: Features Offered by OLC Systems

5.3 *PROBLEMS WITH CATALOG FEATURES*

The questionnaire has 28 questions about how users evaluate various catalog features. (Figure 8). User responses, of course, are dependent on the sys-

TABLE 39

Functions and Capabilities of 15 Online Catalogs

	System[1]														
Function[2]	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q
SELFUNC			X	X		X		X				X	X		
DISRUPT	X	X		X		X						X			X
STACKCOM		X											X		X
BCKSPACE	X	X				X		X		X	X	X	X	X	X
SELDISP		X		X	X	X	X		X	X	X	X	X		
DISPB_F	X	X	X				X			X	X	X	X		X
OLPRINT				X					X	X			X		
SORT									X						
OLINSTR			X	X	X	X	X		X	X	X	X		X	X
HELP		X			X	X	X		X	X	X	X			X
THESAUR			X								X	X	X		
DATELIM	X			X		X			X		X	X	X		
LANGLIM				X					X		X				
TYPELIM	X								X		X		X		
OTHERLIM				X					X		X	X	X		
FREETEXT		X							X		X	X			X
BOOLEAN		X		X					X		X	X			X
TRUNCATE	X	X	X	X	X	X		X	X	X		X	X	X	X
SAVESETS											X				
SELMODE				X	X			X	X			X			
COMMAND	X	X	X	X	X				X	X	X	X	X		X
MENU				X	X	X	X	X				X		X	
OTHERMDE														X	

[1] System names are given in Figure 6 An "X" in the table denotes that the system reports having the capability. [2] System capabilities were reported in the Computer Catalog Profile (Appendix J). Labels used in this table are explained in Figure 7.

tem used. Problems specific to certain systems are not covered here, but will be discussed by principal investigators in reports on the individual systems. This section will examine problems with the system interface (the point at

TABLE 40

Library Holdings Represented in the Online Catalog

	Number of Libraries in Which the OLC Includes:		
Type of Material/ Library Type	*NONE*	*SOME*	*ALL*
MONOGRAPHS			
ARL Libraries	0	5	2
Other Academic	0	3	3
Community College	0	2	0
Public	0	0	4
State and Federal	0	1	1
JOURNALS			
ARL Libraries	1	3	3
Other Academic	2	1	3
Community College	2	0	0
Public	2	1	1
State and Federal	0	1	1
OTHER MATERIALS (newspapers, films, maps, etc.)			
ARL Libraries	1	4	1
Other Academic	2	1	3
Community College	2	0	0
Public	0	2	2
State and Federal	0	1	1

which the user and catalog communicate) that are common to all the online catalogs in this study.

Response categories for all the following questions were:

STRONGLY AGREE 1	AGREE 2	NEITHER AGREE NOR DISAGREE 3	DISAGREE 4	STRONGLY DISAGREE 5	DOES NOT APPLY 6

11. A computer search by title is difficult.
12. A computer search by author is easy.
13. A computer search by subject is difficult.
14. A computer search by call number is easy.
15. A computer search by combined author/title is difficult.
16. Remembering commands in the middle of the search is easy.
17. Finding the correct subject term is difficult.
18. Scanning through a long display (forward or backward) is easy.
19. Increasing the result when too little is retrieved is difficult.
20. Reducing the result when too much is retrieved is easy.
21. Understanding explanations on the screen is difficult.
22. Using codes or abbreviations for searching is easy.
23. Abbreviations on the screen are easy to understand.
24. Locating call numbers on the screen is difficult.
25. Searching with a short form of a name or a word (truncation) is easy.
26. Using logical terms like AND, OR, NOT is difficult.
27. Remembering the exact sequence or order of commands is easy.
28. Understanding the initial instructions on the screen is difficult.
29. Understanding the display for a single book, journal or magazine is easy.
30. Understanding the display that shows more than a single book, journal or magazine is difficult.
31. Interrupting or stopping the display of information is easy.
32. Typing in exact spelling, initials, spaces and hyphens is difficult to do.
33. Knowing what is included in the computer catalog is easy to remember
34. The order in which items are displayed is easy to understand.
35. Displayed messages are too long.
36. Selecting from a list of choices takes too much time.
37. Entering commands when I want to during the search process is difficult.
38. The rate at which the computer responds is too slow.

Figure 8: Catalog Features Questions on the User Questionnaire

5.3.1 *Notes on System-Feature Data and Analysis*

5.3.1.1 *Modifications to System-Feature Data*

As we see in Figure 8, each question solicited a response on a scale from 1 to 5 (Strongly Agree to Strongly Disagree) or 6 (Does Not Apply. See Appendix A for instructions to respondents on these categories.

The raw data from user responses were modified in three ways for this analysis:

- The scale was transformed arithmetically to a range from negative two to positive two, with -2 corresponding to "strongly disagree" and +2 corresponding to "strongly agree."
- "Does not apply" responses were treated as missing, and not included in this analysis.
- Where a particular question was believed irrelevant to a particular system, all responses to that question from that system were given a special missing value "99". These missing values were assigned on the basis of the "Questionnaire Mark-Ups" submitted by each participating OLC system; see Appendix H for details.

This means that:

a) Users' expressions of problems with system features have been corrected for system capabilities, and can, with limitations, be interpreted in the aggregate. Users who say they had a problem with a system feature are presumed to have used that feature in their local OLC. If they say they didn't use it (marked "Does not apply") or if their system doesn't offer it (data revised by the Questionnaire Mark-Up), the response is not included. Consequently, the aggregate *valid* responses to a particular question represent roughly unbiased assessments of problems in using that feature regardless of the particular system used.

b) However, different systems implement features in different ways, as Hildreth[11] has documented in considerable detail. Consequently, if users say they had trouble with subject searching, we can assume they have searched by subject on their local system, but we cannot isolate how their difficulty is affected by the *method* of subject searching adopted by their system.

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[11] Charles Hildreth, *op. cit.*

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c) On the recoded scale, users who neither disagree nor agree with a statement have a "score" of zero. Those who *disagree* with a statement contribute negative scores, and those who *agree* contribute positive scores. This characteristic is useful in interpreting measures of central tendency. For example, a negative median indicates that a majority of users disagreed with statement.

5.3.1.2 On Positively and Negatively Phrased Questions

Figure 8 shows that some questions were phrased *positively* (e.g., '...is easy...'), and some were phrased *negatively* (e.g. "...is difficult..." or "too slow" or "too long," "too much time,"). Dr. Paul Kantor, a consultant to the project and member of our Advisory Committee (Appendix I), has demonstrated that:

a) Positive and negative questions appear to have different "average" responses, because respondents appear more likely to agree to a positively-phrased question than to disagree with a negatively-phrased one.[12]

b) Therefore, the two groups of questions, positive and negative, should be treated separately in analysis and presentation.

c) Negative questions particularly should not be mathematically transformed to "point in the same direction" as positive questions.

Following Dr. Kantor's advice, the two sets of questions will be treated separately in this section. The reader who wishes to review the evidence for this conclusion should consult Appendix C, pages 29 through 35, and the tables that follow in this section.

5.3.2 Responses to Positively-Phrased Questions

Table 41 shows the mean and median responses of users to 13 positively-phrased questions about system features and problems. A positive mean or median response here indicates that the majority of respondents *agreed* to a positively-phrased question about the OLC. The larger the value, the more respondents agreed or strongly agreed, i.e., the fewer indicated that they had a problem. The questions in Table 41 are therefore ranked from negative measures to positive ones, so that the most serious problems appear at the top of the list. The most serious problem in the group appears to be "remembering what is included in the computer catalog"--the median score indicates that a bare majority of users found this *not* easy. For the remaining questions in this group, the majority of users appeared not to have problems (median scores are positive). The next four most serious problems, in rank order, are:

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[12] Dr. Paul A. Kantor, personal communication, June 3, 1982.

a) Reducing the result when too much is retrieved.

b) Using truncation.

c) Scanning through a long display.

d) Interrupting the display.

It is interesting that three of the first five problems seem to be associated with managing large retrieval results. It is also important to point out that the incidence of these problems may vary from system to system, and that system-specific information may be needed to interpret the results and plan appropriate action. The reader is referred to the reports of the project principals, listed in the front matter of this report, for additional information on the incidence of these problems in specific OLC systems.

5.3.3 Responses to Negative-Phrased Questions

Table 42 lists the median responses to 15 negatively-phased questions about system features. In this table, the meaning of positive and negative signs is reversed from Table 41. A positive median score indicates that a majority *agreed* with a *negative* statement about the catalog, i.e., they had a problem. Scores in Table 42 are therefore ordered from positive to negative, with the largest positive medians denoting the most common problems. In this group, a majority of respondents had *difficulty* with, in order of importance:

a) Increasing search results when too little is retrieved.

b) Finding the correct subject term.

For all other questions in this set, the majority of users indicated that they did not have a problem. The next three most important sources of difficulty were:

1. "Entering commands when I want to during the search process."

2. Using Boolean terms.

TABLE 41

Responses to Positively-Phrased Questions About System Problems

Ranked in Order from Greatest to Least Reported Difficulty

		Mean	Median
33.	Knowing what is included in the computer catalog is easy to remember.	-0.02	-0.0
20.	Reducing the result when too much is retrieved is easy.	0.19	0.3
25.	Searching with a short form of a name or a word (truncation) is easy	0.19	0.3
18.	Scanning through a long display (forward or backward) is easy.	0.30	0.6
31.	Interrupting or stopping the display of information is easy.	0.38	0.6
27.	Remembering the exact sequence or order of commands is easy.	0.50	0.7
16.	Remembering commands in the middle of the search is easy.	0.55	0.8
22.	Using codes or abbreviations for searching is easy.	0.58	0.8
23.	Abbreviations on the screen are easy to understand.	0.60	0.8
14.	A computer search by call number is easy	0.65	0.8
34.	The order in which items are displayed is easy to understand.	0.68	0.9
29.	Understanding the display for a single book, journal or magazine is easy.	0.89	1.0
12.	A computer search by author is easy	1.02	1.1

3. Computer response time.

When we look at mean, rather than median scores, we find that the list of "top five problems" changes somewhat, as Table 43 shows. Increasing the result and finding the correct subject term are still the top-ranked problems, and have positive scores. "Entering commands" is still the third-ranked problem, but the response-rate issue rises from fifth to fourth place, and Boolean searching problems are replaced by problems in subject searching.

TABLE 42

Median Responses to Negatively-Phrased Questions About System Problems

Ranked in Order from Greatest to Least Reported Difficulty

19.	Increasing the result when too little is retrieved is difficult.	0.4
17.	Finding the correct subject term is difficult.	0.1
37.	Entering commands when I want to during the search process is difficult.	-0.5
26.	Using logical terms like AND, OR, NOT is difficult.	-0.5
38.	The rate at which the computer responds is too slow.	-0.6
13.	A computer search by subject is difficult.	-0.6
36.	Selecting from a list of choices takes too much time.	-0.7
32.	Typing in exact spelling, initials, spaces and hyphens is difficult to do.	-0.8
35.	Displayed messages are too long.	-0.8
28.	Understanding the initial instructions on the screen is difficult.	-0.9
30.	Understanding the display that shows more than a single book, journal or magazine is difficult.	-0.9
24.	Locating call numbers on the screen is difficult.	-1.0
21.	Understanding explanations on the screen is difficult.	-1.0
15.	A computer search by combined author/title is difficult.	-1.0
11.	A computer search by title is difficult.	-1.1

5.4 IS THERE A RELATIONSHIP BETWEEN SYSTEM PROBLEMS AND SYSTEM FEATURES?

It would, of course, be helpful to advise system designers and library administrators on how to deal with the most serious problems reported above, and one way to do this would be to tie the problems to the existence of specific system *features* that appear to either help or hinder the user.

Unfortunately, we cannot do as much in this regard as we would like with the available data. Table 39, above, shows that some data on system features are available for analysis. Table 39 also shows the wide variety of feature *combinations* in these systems. With these data, it is possible to compare systems

TABLE 43

Mean Responses to Negatively-Phrased Questions About System Problems

Ranked in Order from Greatest to Least Reported Difficulty

19.	Increasing the result when too little is retrieved is difficult.	0.23
17.	Finding the correct subject term is difficult.	0.08
37.	Entering commands when I want to during the search process is difficult.	-0.27
38.	The rate at which the computer responds is too slow.	-0.27
13.	A computer search by subject is difficult.	-0.36
26.	Using logical terms like AND, OR, NOT is difficult.	-0.40
36.	Selecting from a list of choices takes too much time.	-0.45
32.	Typing in exact spelling, initials, spaces and hyphens is difficult to do.	-0.55
35.	Displayed messages are too long.	-0.70
28.	Understanding the initial instructions on the screen is difficult.	-0.76
30.	Understanding the display that shows more than a single book, journal or magazine is difficult.	-0.79
24.	Locating call numbers on the screen is difficult.	-0.82
21.	Understanding explanations on the screen is difficult.	-0.83
15.	A computer search by combined author/title is difficult.	-0.85
11.	A computer search by title is difficult.	-0.91

that have a particular feature with systems that do not, but such comparison is of questionable validity because the systems in each comparison group have a variety of *other* features. For this reason, it may not be possible to "hold other things constant" while analyzing the effect of a single feature on users' problems.

Despite this limitation, we have compared systems with and without each feature on each of the 28 system-problem variables. Selected results shown in Table 44 include:

a) Only the *system features* that showed a statistically reliable and strong relationship with at least one problem variable.[13]

b) The eleven *most serious problems* as shown in Tables 41, 42, and 43.

c) One other "problem variable," included for purposes of discussion only.

5.4.1 System Effects on "Problem Variables"

From Table 44, we note the following system effects on "problem variables":

a) *Increasing the result when too little is retrieved.* A variety of system features seem not to offer much help here. Online printing appears useful. Menu-driven systems appear to be at a significant disadvantage.

b) *Finding the correct subject term.* Systems with online printing and search-limiting by type of publication seem to be more successful here. Truncation appears to present a definite problem. Interestingly, the presence of a searchable term index or thesaurus does not appear to be significantly related to user responses to this question.

c) *Knowing what is included in the catalog.* No system features appear to offer help here. Systems with some forms of search-limiting and with truncation appear to create problems in this area.

d) *Reducing the result when too much is retrieved.* Not surprisingly, limiting features are helpful here, though the relationship is not strong. Also, display selection, searchable indices and thesauri, and online printing seem helpful.

e) *Searching with the short form of a term* (*truncation*). The use of truncation appears easier in systems with thesauri and with search-limiting.

f) *Entering commands when I want to.* Menu-driven systems present definite problems here. This kind of user control appears easier in systems with search limiting, command stacking, and online printing.

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[13] Statistical reliability is determined at the 0.001 level for this analysis; this stringent a criterion was chosen because of the large number of comparisons involved (each of 28 variables, and each of 24 system features). A "strong" relationship was defined as one with an Eta statistic (approximately identical to a Pearson correlation coefficient) of 0.10 or greater.

TABLE 44

Selected Relationships

System Problem[2]	STACKCOM	SELDISP	OLPRINT	THESAUR	DATELIM	TYPELIM	OTHERLIM	TRUNCATE	COMMAND	MENU	OLINSTR	HELP
	System Feature[1]											
19. Increase Result			+							0		
17. Subject Terms			+			+		0	-	-		
33. Knowing Incl.					-		-	-				
20. Reduce Result	-	+	+	+	+	+	+				-	-
25. Truncation				+	+	+						
37. Entering Cmds	+	+	•	+	+	•	+		+	0	-	
38. Response Rate	•	+	+	+	+	+	+	+	•	0	-	-
18. Long Display			+					-	-			
13. Subject Srchng.	-	+	+		+	+	+					
31. Stop Display		-	-		-		-		-			
26. Boolean Opns.	0	•		•	•		•			+		
16. Remember Cmds		-		-	0	-	0				+	+

[1] See Figure 7 for an explanation of system feature codes. A '+' denotes a statistically significant relationship (.001 level) that improves satisfaction. A '•' indicates a strong positive relationship (eta >0.10). A '-' denotes a statistically significant relationship that degrades satisfaction, and '0' denotes a strong negative relationship. [2] Listed in approximate order of importance; See Figure 8 and Tables 41 through 43.

g) *The computer takes too long to respond.* Again, menu-driven systems seem to increase problems here. Most other features appear to reduce complaints about perceived response time. An exception is the provision of online instruction or user-controlled online help systems.

h) *Scanning through a long display (forward or back).* Providing truncation and a command mode of interaction appear to increase problems here, while online printing reduces them, although none of the relationships are strong. Interestingly, the explicit provision of a forward/backward display control feature (not included in Table 44) is not statistically related to this question.

i) *Searching by subject.* Limiting and online printing features appear helpful, as does the ability to select display formats.

j) *Interrupting the display.* Several system features have weak negative associations with this question, but the nature of the relationship is not obvious. The presence of a display interruption feature (not included in Table 44) is not statistically related to this question.

k) *Using logical terms (and, or, not).* There are several strong positive relationships--selection of display formats, searchable thesauri, and limiting by date or by another element. Menu-driven systems appear to have a mild advantage here (perhaps because they do not require users to construct explicit Boolean arguments), and the command stacking feature appears to represent a definite disadvantage in this regard.

l) *Remembering commands in the middle of a search.* Most of the features included in Table 44 present problems in this respect, two of them (limiting by date and by another element) relatively large problems. The exceptions are the provision of online instruction and user-directed help screens, which are positively (although not strongly) related to the ability to remember commands.

5.4.2 *Advantages and Disadvantages of System Features*

We take note of the following regarding the several features taken as a whole:

a) *Online printing* is almost universally helpful, aiding users in increasing and reducing retrieval results, finding the right subject term, and so on. The one negative correlation, with "interrupting the display," may suggest problems in user control of the printing process.

b) *Search limiting features*, including limiting by date, type of material, and other elements, are generally helpful, but apparently make the OLC appear more difficult to master. This is indicated by strong negative relationships with the ability to remember commands in the middle of a search. Limiting by language was not a statistically important variable in this analysis.

c) *Searchable indices and thesauri* also appear to be generally helpful in searching, but add to confusion in using the interface.

d) *User-selected display formats* are also helpful on the whole, but seem to be confusing to some users.

e) *Command stacking*, for systems with this feature, seems to make it easier to enter commands, and contributes to a faster perceived response rate, but contributes to problems in other areas.

f) *Truncation* is very nearly a universal problem for users; the only exception is an apparent positive contribution to perceived response rate.

g) *The two principal methods of search control, command language and menus*, get somewhat mixed reviews. Command language systems receive some positive votes, including a strong relationship to perceived system response, but appear to have some mild drawbacks as well. Menu-driven systems, on the other hand, rack up some important disadvantages, most notably in perceived response time and in ability to control the OLC session, but there are apparently some offsetting advantages as well. For instance, menu systems appear to engender fewer problems in using Boolean operators.

h) *Online help and instruction features* either do not provide help where it's needed (e.g., in reducing search results) or add problems of their own (e.g., response time), but provide significant aid to users who aren't sure what to do next, or how to do what they want.

5.4.3 On Design Trade-Offs in Online Catalogs

The point of the foregoing sections was *not* to identify those features that are specifically desirable or undesirable in online catalogs. As we indicated, the evidence is not strong enough to demonstrate the clear superiority of any particular feature.

It was, however, our intention to introduce the notion of *design trade-offs* into the discussion of online catalog development. To support the idea that a particular feature or design choice, implemented to improve one aspect of the catalog, may have undesirable consequences in another aspect, consider the following observations that might be drawn from the previous discussion.

1. When features are added to address specific searching problems (e.g., limiting features), they often work in that context, but add to the complexity of the catalog and make it difficult for users to remember what command among many to use, and when and how to use it.

2. With online instruction or user-addressable help functions, people can find and use the right command in a complex catalog, but these aids are often perceived as slowing down the catalog's response time.

3. When a menu-driven system is instituted to avoid the problems of complexity and syntax in command-driven systems, some operations become easier; however, users perceive that flexibility is lost and that the catalog becomes slower.

It is not our intent to "prove" these points here. Although the data presented so far support them to an extent, any additional support will be dependent upon more detailed analysis of the questionnaires. It is also not our intent to suggest solutions to these design dilemmas, though possible solutions may well lie somewhere within the project's database. For the present, we can only highlight the fact that there is no uniquely right answer to the question of how to design a computer catalog, and encourage efforts to investigate and define the dimensions of these trade-offs.

Chapter 6

LIBRARY PROBLEMS

6.1 INTRODUCTION

Six questions on the User Questionnaire asked how various library services helped users with the online catalog, and what problems they experienced with them. These questions also asked about several aspects of equipment and environment considered to be within the purview of the library, rather than the computer system *per se*. The questions are presented in Figure 9. Aggregate response tabluations will be found in Appendix C, on pages 26 (Question 8) and 29 to 44 (Questions 39 to 43). Tabulations by type of library are in Appendix D, pages 27 (Question 8) and 60 to 65 (Questions 39 to 43).

6.2 MOST USERS GET HELP FROM SIGNS AND BROCHURES

Table 45 shows that the largest number of users got help from signs or printed materials (40.6 percent), either alone or in combination with other forms of assistance. The next most popular form of help was online instruction (32 percent), followed by help from library staff (22.2 percent), and help from another library user (5.6 percent).

However, many users get help in several ways. Of those who used signs and brochures, for instance, 36.7 percent also used online instruction, and 22.9 percent also got help from library staff. Of those who used online instruction, 46.6 percent also used signs, and 20.4 percent also got aid from library staff.

8. I got help in doing this computer catalog search from:
(Mark *ALL* that apply)

- a. Printed material or signs
- b. Instructions on the terminal screen
- c. Library staff member
- d. Person nearby
- e. I did not get help.

Response categories for the following questions were:

STRONGLY AGREE	AGREE	NEITHER AGREE NOR DISAGREE	DISAGREE	STRONGLY DISAGREE	DOES NOT APPLY
1	2	3	4	5	6

39. The availability of signs and brochures is adequate.
40. Signs and brochures are not very useful.
41. The staff advice is often not helpful.
42. It is hard to find a free terminal.

43. When I use the computer catalog terminal:
(Mark *YES* or *NO*)

	YES	*NO*
a. The keyboard is confusing to use.................	Y	N
b. There is too much glare on the screen............	Y	N
c. The letters and numbers are easy to read	Y	N
d. The lighting around the terminal is too bright....	Y	N
e. There is enough writing space at the terminal	Y	N
f. Nearby noise is distracting	Y	N
g. The terminal table is too high or too low	Y	N
h. The printer is easy to use	Y	N

Figure 9: Library Environment Questions on the User Questionnaire

6.2.1 Almost One-Third of Users Said They Used No Assistance at All

The third-ranking response to this question, marked by 31 percent of users, is not a form of assistance at all: it is "I did not get help." Apparently the questionnaire instrument was well understood by these respondents; only about 3 percent of them also marked another response to this question.

6.2.2 First-Time Users Get Help from Library Staff

As a group, new users of the OLC are more likely to get some kind of help. Only 9.9 percent said they did not get help during their session, as compared with 31 percent overall.

For new users, library staff are apparently the most important form of assistance. Over half (50.8 percent) mentioned the staff as a source of aid, compared to 22 percent overall).

6.2.3 Users in Academic Libraries are More Self-Reliant

When responses to Question 8 are examined by type of library, we see that for all library types, signs and brochures are generally the first-ranked source of aid (except at community colleges, where online instruction is first and printed material second), and that assistance from nearby users is ranked last. However, the response, "I did not get help", was ranked second at the four-year academic sites, but fourth at all others, suggesting that academic users are perhaps more self-reliant. It may also be that academic users have more "user-friendly" catalogs, or that they need less help because they are more frequent OLC users (see Chapter 4).

6.2.4 What Happens When Online Aids are Provided?

The second most popular response, "Instructions on the terminal screen," is not directly associated with library support services. Also, not all systems offer explicit online instruction, making it difficult to interpret the importance of this response. To correct for this bias, we defined catalog systems as having one of three levels of online assistance:

1. None at all: neither online assistance (OLINSTR) or user-addressable help (HELP) (see Chapter 5 and Figure 7).
2. One form of online assistance (either OLINSTR *or* HELP).

3. Two forms of assistance (both OLINSTR *and* HELP).

TABLE 45

Sources of Help Used by OLC Users

Question 8: *I got help in doing this computer catalog search from:*
(Mark ALL *that apply)*

Ranked in Order of Frequency of Response[1]

a.	Printed material or signs	40.6%
b.	Instructions on the terminal screen	32.0
e.	I did not get help	31.0
c.	Library staff member	22.2
d.	Person nearby	5.6

[1] Percentages sum to more than 100 due to legitimate multiple responses.

The results of this adjustment are displayed in Table 46. When the system has explicitly-designed online aids, they are indeed used: 34.3 percent of users in systems with two forms of aid used them, as opposed to 28.5 percent in systems with no explicit aids. On the other hand, one might wonder just what "instructions on the terminal screen" were used by the 28.5 percent of users in the systems with no aids.

Online aids reduce reliance on printed materials; 57.1 percent of users in no-aid systems used print sources, compared to 31 to 38 percent in systems with aids. This relationship (the more online aid, the less reliance on print) has a relatively strong correlation, r=0.132.

Of some interest here is the pattern of help from library staff. The proportion of respondents mentioning staff help *is greatest for systems with one* online aid feature. This relationship is statistically reliable, in a curious way. The Pearson correlation is 0.153; the asymmetric eta statistic, with use of library staff as a dependent variable, is 0.213. Taken together, the two statistics suggest that, although there is a mild tendency for reliance on staff to increase as online aid increases, the pattern is not linear. Rather, there is stronger support for the pattern we see in Table 46: *one* aid feature *increases* reliance on staff, while *two* features *reduce* use of staff aid.

Another interesting offshoot of online assistance is that it appears to increase *self-reliance*. The greater the number of such aids, the greater the proportion of respondents who say they did not get any help at all (r=0.088). The relationship is not strong, and the finding is open to several interpretations. For example, (a) in systems with online aid, respondents may not *realize* that they have received assistance, or may not have actively sought help, even though they got some (if this is true, the actual incidence of benefit from online aid is greater than Table 46 would suggest), or (b) systems with online aids happen to be easier to use, so that the apparent relationship between online aids and self-reliance is spurious.

TABLE 46

Sources of Help in Systems With and Without Online Assistance

Source of Help	Systems With No Aids	Systems With One Aid	Systems With Two Aids
a. Printed material or signs	57.1%	30.8%	38.3%
b. Instructions on the terminal screen	28.5	29.4	34.3
c. Library staff member	26.2	36.1	14.9
d. Person nearby	5.1	7.2	5.2
e. I did not get help	24.2	27.1	35.3
TOTAL[1]	141.1	130.6	128.0

[1] Percentaged sum to more than 100 due to legitimate multiple responses.

6.3 *TERMINAL AVAILABILITY IS THE MOST SERIOUS LIBRARY SERVICE PROBLEM*

Median and mean responses to the four Likert-scale questions about library support services are shown in Table 47. The majority of users did not have problems with the services listed. The most "serious" matter was the availability of terminals, with mean and median scores closest to zero, showing that fewer respondents indicated that they *did not* have a problem here.[14] The second most serious issue was the availability of signs and brochures; the third, the usefulness of signs and brochures; and the fourth, the helpfulness of staff assistance.

TABLE 47

Responses to Questions About Library Service Problems

	Mean	*Median*
39. The availability of signs and brochures is adequate. ..	0.46	0.7
40. Signs and brochures are not very useful............	-0.68	-0.9
41. The staff advice is often not helpful.	-0.85	-1.0
42. It is hard to find a free terminal....................	-0.29	-0.6

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[14] For purposes of this discussion, we are treating the one positively-phrased and three negatively-phrased questions together. The *caveats* about mixing the two types of questions, discussed in the previous chapter, still obtain.

6.4 THE CHIEF PHYSICAL SUPPORT PROBLEM IS INSUFFICIENT WRITING SPACE AT THE TERMINAL

Table 48 shows the responses to the eight categories in Question 43 about problems of equipment and library environment: what we have termed physical support problems. Far and away the most significant problem, mentioned by 36.1 percent of respondents, is insufficient writing space at the terminal. The second-ranking problem, mentioned by 28 percent of respondents, is difficulty in using the local printer.[15] Following these is a group of three responses on (a) legibility of the screen (12.1 percent), (b) ambient noise (11 percent), and (c) the terminal keyboard (10.7 percent) Bringing up the rear is another group of three issues, dealing with (i) height of the terminal table (8.2 percent), (ii) ambient lighting (7.8 percent), and (iii) glare on the CRT screen (7.6 percent).

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[15] It should be recalled that, in library systems where *no* local printers are available, the responses are not included in the tabulations for this response category.

TABLE 48

Problems with Library Equipment and Facilities

Question 43: ***When I use the computer catalog terminal*:**

Ranked in Order of Frequency of Response[1]

	Problem	*Not A Problem*
e. There is enough writing space at the terminal	36.1	63.9
h. The printer is easy to use	28.0	72.0
c. The letters and numbers are easy to read	12.1	87.9
f. Nearby noise is distracting	11.0	89.0
a. The keyboard is confusing to use	10.7	89.3
g. The terminal table is too high or too low	8.2	91.8
d. The lighting around the terminal is too bright	7.8	92.2
b. There is too much glare on the screen	7.6	92.4

[1] Response percentages are reordered from "YES" and "NO" to "PROBLEM" and "NOT A PROBLEM" according to the sense of the question: see Figure 9 for the text of the original question, and Appendix C for the original response distribution.

Chapter 7

USER SATISFACTION

7.1 GENERAL

Questions 5 to 7, 9 and 10 of the User Questionnaire address users' satisfaction with the search just completed and with the online catalog in general. These questions are displayed in Figure 10. Tabulations of aggregate responses will be found on pages 22 to 29 of Appendix C, and tabulations by type of library on pages 22 to 30 of Appendix D.

7.2 EVALUATION OF THE MOST RECENT SEARCH

7.2.1 Eighty Percent of Users Find Some Relevant Material in Their Search

Table 49 shows that, overall, about 16 percent of OLC users find nothing in any particular search; conversely, about 84 percent find at least something. This distribution does not differ significantly among the five types of libraries; however, there are significant differences among individual libraries in the ARL, non-ARL academic, and public library groups. In the ARL group, the difference is centered on Dartmouth University and the University of California campuses, where a noticeably greater percentage of respondents say they found nothing they were looking for (36.6 percent and 31.5 percent respectively). In the non-ARL academic group, users are less likely to find any relevant material at Ohio University at Athens (25.5 percent) and the Claremont Colleges (16.3 percent). Curiously, Athens is one of the three universities (the others are the University of Akron and Mankato State) in which users systematically appear to find *more* than they were looking for (21.6 percent, 28.7 percent, and 18 percent, respectively). Among the public libraries, Pike's Peak respondents are more likely to find nothing (25 percent) and Dallas Public Library users are more likely to find more than they sought (25 percent).

In many cases, database size appears to play a significant role for the libraries in which users were more likely to find nothing. Dartmouth's database has only some of its monographs, journals, and other materials, and the University of California has only a prototype database of monographs, with no

5. In this computer search I found: (Mark *ONE* only)

a. More than I was looking for
b. All that I was looking for
c. Some of what I was looking for
d. Nothing I was looking for

6. In relation to what I was looking for, this computer search was: (Mark *ONE* only)

a. Very satisfactory
b. Somewhat satisfactory
c. Somewhat unsatisfactory
d. Very unsatisfactory

7. I came across things of interest other than what I was looking for:

a. Yes
b. No

9. My overall or general attitude toward the computer catalog is: (Mark *ONE* only)

a. Very favorable
b. Somewhat favorable
c. Somewhat unfavorable
d. Very unfavorable

10. Compared to the card, book, or microfiche catalog in this library, the computer catalog is: (Mark *ONE* only)

a. Better
b. About the same
c. Worse
d. Can't decide

Figure 10: User Satisfaction Questions on the User Questionnaire

other types of materials. Likewise, the Claremont system contains only some monographs and no other materials. On the other hand, Athens says that all its holdings are represented in the database, and Pike's Peak's database has all non-periodical materials. By contrast, the Mankato system, which, like Dartmouth, has some holdings in all forms of materials, is among the systems likely to retrieve *more* than was sought. Obviously, database size and proportion of holdings represented in the catalog are factors in how users assess retrieval, but cannot be the only explanations.

Another possible explanation, of course, is that certain features of these systems contribute to higher levels of dissatisfaction; this is a question that will be taken up in Chapter 9.

TABLE 49

Amount of Relevant Material Found in the OLC Search

Question 5: *In this computer search I found:* (*Mark* ONE *only*)

a. More than I was looking for	16.6%
b. All that I was looking for	27.5
c. Some of what I was looking for	39.6
d. Nothing I was looking for	16.3

7.2.2 Amount Retrieved Is Related to Familiarity with the OLC

The amount of relevant material retrieved appears not to be related to the level of library experience or to the demographic characteristics of the user, with one rather curious exception: users who are familiar with the computer catalog tend to retrieve more material, *except that first-time users are about as successful as patrons who use the OLC every visit*. This is demonstrated in Table 50. The relationship is not especially strong, and it seems open to several interpretations, for instance:

1. Retrieval results *are* related to experience, except that first-time users cannot reliably judge the amount of "relevant" material retrieved; some experience is required to know how much to expect from the OLC.

2. As a logical extension of the first interpretation, users' judgments of "how much" they retrieved are conditioned by their experience. New users do not know what to expect, and are pleasantly surprised. Frequent users know the catalog's capabilities, and their judgment is colored by their knowledge of the OLC's limitations. Users in the middle range of experience expect more than the catalog can deliver, and therefore believe that they did not get all the relevant material stored in the catalog.

3. Retrieval results influence frequency; people who retrieve little or nothing *become* infrequent catalog users. This causal relationship would not, of course, affect first-time users, explaining their similarity to frequent users.

TABLE 50

Retrieval Results and OLC Experience

In This Search I Found:	*I Use This Computer Catalog:(%)* Every Visit	Most Visits	Occasionally	Rarely	Not Before Today
More than I was looking for	21.9	14.1	15.2	12.5	21.1
All that I was looking for	28.8	30.8	27.0	20.4	22.5
Some of what I was looking for	37.7	42.9	38.7	37.9	36.3
Nothing I was looking for	11.7	12.2	19.1	29.2	20.0
TOTAL[1]	99.8	100.0	100.0	100.0	100.0

[1] Totals may deviate from 100 percent due to rounding errors.

7.2.3 *Eighty Percent of Users are Satisfied with Results of the Search*

As Table 51 shows, 80 percent of respondents found their most recent search at least satisfactory, and over half of these (46.5 percent overall) found the search "very satisfactory." As with judgments of retrieval results, levels of satisfaction do not differ significantly between types of libraries, but do vary among libraries within types, with the same libraries (Dartmouth, University of California, Athens, Claremont and Pike's Peak) showing unusually high levels of extreme dissatisfaction (22.0, 18.9, 13.7, 8.3 and 15.2 percent respectively). As noted previously, this may be due in part to problems of database coverage. It also arises from a very strong association between the amount of relevant material retrieved and the user's assessment of the search.

TABLE 51

Satisfaction with Search Results

Question 6: *In relation to what I was looking for, this computer search was:* (*Mark* ONE *only*)

a. Very satisfactory	46.5%
b. Somewhat satisfactory	33.6
c. Somewhat unsatisfactory	10.4
d. Very unsatisfactory	9.5

7.2.4 *There is a Strong Relationship Between Amount Retrieved and Search Satisfaction*

There is a strong positive relationship between the amount of relevant material retrieved and the level of satisfaction with the search (Table 52). The Pearson product-moment correlation[16] between Question 5 and Question 6 is

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[16] By rigorous analytical standards, the Pearson correlation is not the correct measure of association for variables measured on the scales used in Question 6 and 7; however, more "suitable" statistics (Wilkes' lambda, gamma and eta) are of similar magnitude, and Pearson's *r* is more likely to

0.663. It is particularly interesting that finding more than you wanted is apparently a *positive* experience; the satisfaction distribution for those who said they found "more than I was looking for" is virtually identical to that for respondents who found "all or most" of what they sought.

TABLE 52

Search Satisfaction in Relation to the Amount of Material Retrieved

Satisfaction with Search	*Amount Retrieved (% of respondents)* More	All	Some	None
Very satisfactory	82.2	81.5	22.5	7.8
Somewhat satisfactory	15.3	17.0	60.8	13.9
Somewhat unsatisfactory	1.7	1.0	14.4	25.8
Very unsatisfactory	0.7	0.5	2.3	52.4
TOTAL[1]	99.9	100.0	100.0	99.9

[1] Totals may deviate from 100 percent due to rounding errors.

7.2.5 *Search Satisfaction Is Related to OLC Experience*

Because search satisfaction is strongly related to search results, it is not surprising that it shows a relationship to experience with the online catalog that is similar to the relationship for search results. Table 53 displays this relationship, and shows once again that a positive attitude toward the search is associated with frequent use of the catalog, except that new users appear to resemble frequent users more than they do respondents who use the catalog rarely.

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be familiar to readers of this report.

TABLE 53

Search Satisfaction and OLC Experience

This Search Was:	*I Use This Computer Catalog:(%)* Every Visit	Most Visits	Occasionally	Rarely	Not Before Today
Very Satisfactory	53.6	47.7	43.0	31.8	48.5
Somewhat Satisfactory	30.7	35.8	34.6	34.8	30.6
Somewhat Unsatisfactory	9.1	9.7	11.6	12.4	10.1
Very Unsatisfactory	6.6	6.8	10.8	20.9	10.8
TOTAL[1]	100.0	100.0	100.0	99.9	100.0

[1] Totals may deviate from 100 percent due to rounding errors.

7.2.6 About Half of Users Discover Interesting Material They Were Not Seeking

Almost half of the respondents (48.9 percent) say they found something of interest other than what they were looking for during the search (Appendix C, page 24). This proportion does not differ significantly by type of library or among libraries within each type. "Serendipity" does have an influence on users' ratings of the catalog session, and appears in turn to be influenced by experience with the online catalog. Table 54 shows that 59 percent of the users who rated the search very satisfactory also found unexpected things of interest, while only 17 percent of users who found the search very unsatisfactory had this experience. Table 55 shows that "accidental discovery" is related to OLC experience in the same curious way that experience relates to other factors: more frequent users are more likely to find unexpected material, but first-time users resemble the most experienced users in this regard. It would appear, nonetheless, that previous experience with the OLC is an aid to "accidental discovery" of potentially relevant material. Although serendipity is apparently related to experience and to search satisfaction, it is *not* related to the characteristics of the database. Systems with complete holdings represented in the OLC do not appear to generate higher rates of "accidental discovery" than the systems presenting only partial holdings.

TABLE 54

Search Satisfaction and Serendipity

Satisfaction with Search	*Found Other Things of Interest (%)* Yes	No	Total
Very satisfactory	58.7	41.3	100.0
Somewhat satisfactory	51.4	48.6	100.0
Somewhat unsatisfactory	35.5	64.5	100.0
Very unsatisfactory	16.7	83.3	100.0

7.3 EVALUATION OF THE ONLINE CATALOG AS A WHOLE

7.3.1 Over 92 Percent of Users Like the Online Catalog

About 67 percent of respondents said their attitude toward the online catalog was very favorable, and 92.4 percent rated their attitude as favorable or very favorable. Only 7.6 percent of respondents were not favorably disposed to the OLC (Table 56 and Appendix C, page 28). No statistically important differences were found between types of libraries, but inspection of the data seems to indicate that attitudes toward the OLC may be a special problem for the public library clientele, in which 11.5 percent expressed very unfavorable attitudes toward the OLC, as compared with 7.6 percent overall (Appendix D, page 29).

Like the other evaluation variables discussed above, overall satisfaction is related to familiarity with the computer catalog. Frequent users are more likely to be very satisfied with the catalog, and infrequent users less satisfied. Once again, first-time users are in an unusual position in this relationship; they like the OLC better than infrequent users, but not as well as frequent users. Table 57 presents the relevant data.

TABLE 55

Serendipity and OLC Experience

Found Unexpected Things Of Interest:	*I Use This Computer Catalog:(%)* Every Visit	Most Visits	Occa-sionally	Rarely	Not Be-fore Today
Yes	57.1	49.8	45.6	39.5	52.3
No	42.9	50.2	54.4	60.5	47.7
TOTAL	100.0	100.0	100.0	100.0	100.0

TABLE 56

Overall Satisfaction with the Computer Catalog

Question 9: *My overall or general attitude toward the computer catalog is*:

a. Very Favorable	67.0%
b. Somewhat Favorable	25.4
c. Somewhat Unfavorable	5.3
d. Very Unfavorable	2.3

TABLE 57

Overall Satisfaction and OLC Experience

General Attitude Toward Computer Catalog Is:	*I Use This Computer Catalog:* (%) Every Visit	Most Visits	Occasionally	Rarely	Not Before Today
Very Favorable	73.5	70.4	63.8	47.5	65.4
Somewhat Favorable	20.7	24.5	28.6	33.3	24.7
Somewhat Unfavorable	4.1	3.8	5.7	13.2	6.8
Very Unfavorable	1.7	1.2	1.9	6.0	3.2
TOTAL[1]	100.0	99.9	100.0	100.0	100.1

[1] Totals may deviate from 100 percent due to rounding errors.

7.3.2 *Overall Satisfaction is Related to Search Satisfaction and Retrieval Results*

Not surprisingly, there is a fairly strong relationship between users' overall evaluation of the online catalog and the results of, and satisfaction with, their most recent searches. What *is* surprising, however, is that respondents that had very unsatisfactory search results nonetheless tend to express favorable attitudes to the online catalog.

- People who found what they were looking for in the most recent search (Question 5) tend to rate the catalog more favorably than those who found nothing they wanted (Table 58). The correlation between retrieval results and overall satisfaction is only moderately strong, r=0.282. About 83 percent of those who found more than they were looking for rated the catalog as *very favorable*, a percentage that declines noticeably as retrieval results decline. However, over 76 percent of those who found *nothing* in their last search express a favorable or very favorable attitude to the OLC.

- There is a fairly strong correlation between satisfaction with the most recent search (Question 6) and attitude toward the catalog; r=0.468. The relationship is displayed in Table 59. Almost 86 percent of those who were *very satisfied* with their last search expressed a *very favorable* attitude toward the computer catalog, a percentage that declines to 33.6 percent for those who were *very unsatisfied* with their last search. Still, over 65 percent of those who were *very unsatisfied* with their last search expressed *favorable* or *very favorable* attitudes toward the OLC.

- "Serendipity" seems to play a factor in users' evaluation of the catalog: the correlation between overall attitude and instances of finding materials by accident (Question 7) is 0.206. While only 3 percent of those who found something of unexpected interest expressed *unfavorable* or *very unfavorable* attitudes, 11.7 percent of those who did *not* find unexpected items rated their experience with the catalog as *unfavorable* or *very unfavorable*.

7.3.3 Almost Three-Fourths of Users Prefer the OLC to the Card Catalog

As Table 60 shows, 74.5 percent thought that the online catalog was better than the card (or book or microform) catalog, and about 9 percent thought the OLC was worse. The data show no important differences in this distribution by type of library, although there is a more marked preference for the card catalog among public library respondents, among whom about 13 percent said the OLC was worse than the card catalog (Appendix D, page 30). Once again, users' evaluations appear related to OLC experience, with frequent users more likely to prefer the OLC; and once again, first-time OLC users are more likely to prefer it than are infrequent OLC users.

TABLE 58

Attitude Toward the OLC in Relation to the Amount of Material Retrieved

Attitude Toward the OLC	*Amount Retrieved (% of respondents)* More	All	Some	None
Very favorable	82.8	76.9	62.0	46.3
Somewhat favorable	14.9	20.5	30.8	32.0
Somewhat unfavorable	1.6	2.2	5.5	13.5
Very unfavorable	0.7	0.5	1.7	8.2
TOTAL[1]	100.0	100.1	100.0	100.0

[1] Totals may deviate from 100 percent due to rounding errors.

TABLE 59

Attitude Toward the OLC in Relation to Satisfaction with the Most Recent Search

	Satisfaction with Search (%)			
Attitude Toward the OLC	Very Satisfied	Somewhat Satisfied	Somewhat Unsatisfied	Very Unsatisfied
Very favorable	85.9	60.3	36.0	33.6
Somewhat favorable	12.7	35.6	42.7	31.9
Somewhat unfavorable	0.8	3.5	18.4	18.8
Very unfavorable	0.5	0.5	2.9	15.7
TOTAL[1]	99.9	99.9	100.0	100.0

[1] Totals may deviate from 100 percent due to rounding errors.

TABLE 60

User Comparisons of Computer and Card Catalogs

Question 10: *Compared to the card, book, or microfiche catalog in this library, the computer catalog is*: (*Mark* ONE *only*)[1]

a. Better	74.5%
b. About the same	16.5
c. Worse	9.0

[1] Response 10d, "Can't Decide," is excluded from this table; see Appendix C, page 29, for a complete distribution.

7.3.4 Preference for the OLC is Related to Search Satisfaction and Retrieval Results

As with overall attitudes toward the online catalog, users' preferences for the OLC or the card catalog are rather strongly related to search satisfaction and retrieval results, but even those who had unsuccessful or unsatisfactory searches seem to prefer the computer catalog.

- There is a correlation of 0.230 between amount retrieved and catalog preference, with those who retrieved the most being most likely to prefer the online catalog (Table 61). Nevertheless, *54.5 percent of those who found nothing in their search think the online catalog is better than the card catalog*.

- There is an even stronger correlation, r=0.383, between search satisfaction and catalog preference. Naturally, those most satisfied with the results of their search are more likely to prefer the online catalog (Table 62). However, of those who were *unsatisfied* or *very unsatisfied* with their last search, *47 percent* prefer the online catalog, and 29 percent prefer the card catalog.

- There is a mild relationship between instances of serendipity and catalog preference (r=0.172). Of those who found something unexpected in the course of the search, 81 percent prefer the online catalog, and 5 percent prefer the card catalog; of those who did not, 68 percent prefer the OLC, and 13 percent prefer card.

- Users with a favorable attitude toward the OLC are more likely to prefer it to the card catalog. The strength of this relationship (r=0.602) is among the strongest bivariate correlations found in the data analysis. This is not surprising. What *is* of interest is that the relationship is not even stronger. About 9 percent of those with a *very unfavorable* attitude toward the computer catalog *nevertheless prefer the OLC to the card catalog*. This relationship is displayed in Table 63.

TABLE 61

Catalog Preference in Relation to the Amount of Material Retrieved

Compared to Card, Computer Catalog is:	*Amount Retrieved (% of respondents)* More	All	Some	None
Better	85.9	80.3	73.4	54.5
About the same	11.0	15.7	17.6	21.4
Worse	3.1	4.0	9.0	24.2
TOTAL[1]	100.0	100.0	100.0	100.1

[1] Totals may deviate from 100 percent due to rounding errors.

7.4 HOW DO NON-USERS EVALUATE THE ONLINE CATALOG?

The non-user questionnaire asked those who had never before used the online catalog to judge its potential value to them. The relevant questions are displayed in Figure 11.

TABLE 62

Catalog Preference in Relation to Satisfaction with the Most Recent Search

Compared to Card, Computer Catalog is:	*Satisfaction with Search (%)* Very Satisfied	Somewhat Satisfied	Somewhat Unsatisfied	Very Unsatisfied
Better	86.0	74.0	52.7	40.9
About the same	11.5	19.1	25.3	23.0
Worse	2.4	6.8	22.1	36.1
TOTAL[1]	99.9	99.9	100.1	100.0

[1] Totals may deviate from 100 percent due to rounding errors.

TABLE 63

Catalog Preference in Relation to Overall Attitude Toward the OLC

Compared to Card, Computer Catalog is:	*Attitude Toward the OLC (%)* Very Favorable	Somewhat Favorable	Somewhat Unfavorable	Very Unfavorable
Better	88.3	53.5	11.0	8.6
About the same	10.0	33.8	28.4	5.9
Worse	1.7	12.7	60.6	85.5
TOTAL	100.0	100.0	100.0	100.0

7.4.1 Almost 90 Percent of Non-Users have a Favorable Attitude Toward

4. My overall or general attitude toward the computer catalog is:

- a. Very favorable
- b. Somewhat favorable
- c. Somewhat unfavorable
- d. Very unfavorable

6. Compared to the card, book, or microfiche catalog in this library, the computer catalog is: (Mark *ONE* only)

- a. Better
- b. About the same
- c. Worse
- d. Can't decide

Figure 11: Online Catalog Evaluation Questions on the Non-User Questionnaire

the Online Catalog

The general attitude oward the online catalog among those who have *never* used it before is overwhelmingly positive: 89.2 percent say they have a favorable or very favorable attitude to the online catalog. There is a statistically reliable difference between users and non-users in response to this question, but, as Table 64 shows, the difference appears principally in the distinction between *somewhat favorable* and *very favorable* attitudes: only 12.8 percent of non-users reported an unfavorable attitude, as contrasted with 7.6 percent of users.

7.4.2 *Almost Two-Thirds of Non-Users Think the OLC Is Better than the Card Catalog*

Not surprisingly, 42 percent of non-users said they could not decide whether the card or computer catalog was better (Appendix E, page 20), as compared with only 5.1 percent of OLC users (Appendix C, page 29). Among those non-users who were able to render a judgment, however, 62.8 percent believed that the online catalog was better than the card catalog. In fact, only

TABLE 64

User and Non-User Attitudes Toward the Online Catalog

Question 9 (User) and 4 (Non-User): *My overall or general attitude toward the computer catalog is*:

	User	Non-User
a. Very Favorable	67.0%	45.9%
b. Somewhat Favorable	25.4	43.3
c. Somewhat Unfavorable	5.3	8.4
d. Very Unfavorable	2.3	2.4

7.2 percent of these respondents said the card catalog was better, as compared to 9 percent of OLC users (Table 65).

TABLE 65

User and Non-User Comparisons of Computer and Card Catalogs

Question 10 (User) and 6 (Non-User): *Compared to the card, book, or microfiche catalog in this library, the computer catalog is*: (*Mark* ONE *only*)[1]

	User	Non-user
a. Better	74.5%	62.8%
b. About the same	16.5	29.9
c. Worse	9.0	7.2

[1] Response 10d (User) and 6d (Non-User), "Can't Decide," is excluded from this table; see Appendix C, page 29 and Appendix E, page 20, for complete distributions.

7.4.3 If Non-Users Think the OLC Is so Good, Why Don't They Use It?

At the end of Chapter 4, we drew a rough portrait of "typical" non-users of the OLC as:

- Using libraries, and library catalogs, infrequently, but
- Nevertheless feeling that the OLC can be learned quickly and easily, and indicating that they are likely to use it in the future, and
- Not being put off by the OLC because it uses a computer.

In this chapter we have seen that:

- While the *intensity* of non-users' favorable attitudes toward the OLC is not as great as that of OLC users, they are on the whole favorably disposed to the OLC in about the same proportions as are users.

- The user groups who are *most favorably* disposed to the OLC are *frequent* users and *first-time* users; infrequent users are generally less successful and have less favorable attitudes.

Any conclusion drawn from these observations must be speculative, and not amenable to confirmation from the data collected in this project. We nonetheless will offer such a conclusion here, because the pattern of these observations suggests an unexpected finding that could have serious effects on the way in which libraries promote and manage their online catalogs.

It would appear that most respondents, both users and non-users, have no expressed fear of the computer itself. *In fact, their initial expectations for the computer catalog may be greater than our capacity to deliver services.* This conclusion is suggested by the pattern of evidence showing that non-users think the OLC is quick and easy to learn, and first-time users are generally pleased with the results of their first use, but infrequent OLC users are significantly less satisfied than the average. The picture, then, is of high expectations dashed by limited experience with the OLC. Frequent users, however, are more favorably disposed to the OLC. This may be because they have adjusted their expectations to accord more closely to the capabilities of the catalog, or that experience has taught them what they need to know to use the system effectively (note, though, that even this represents an "adjustment of expectations," namely the expectations of non-users that the use of the catalog can be learned quickly and easily).

Chapter 8

IMPROVEMENTS REQUESTED BY USERS

8.1 GENERAL

Questions 44-46 of the user questionnaire ask users to suggest improvements to the online catalog system in three different areas:

- Features and capabilities to be added to the system
- Service improvements
- Additional kinds of material to be included in the catalog.

The questions are displayed in Figure 12. Each question has a list of categories from which respondents are instructed to select up to four improvements or additions.

8.2 IMPROVEMENTS TO THE CATALOG SYSTEM

Question 44 lists fourteen different features and capabilities that could be added to the computer catalog. Response categories deal with several different aspects of the catalog, including search capabilities, provisions for information and instruction, item location in the library, and manipulation of output.

Table 66 shows the categories of question 44 ranked by frequency of response. Figures in this table reflect data collected from all libraries participating in the study, regardless of individual system differences. Interpretation is complicated by the fact that each library system offers different catalog features. Ranking responses according to the aggregate data may result in inaccuracy. To remedy this problem, separate analyses of this data have been run, excluding for the different response categories those systems that already have that feature. Two sources have been used to identify the library systems to be excluded from analysis: system variables and questionnaire mark-ups. The system variables (drawn from the System Profile Questionnaire) indicate the presence or absence of a specific feature or capability for each library system.

44. Select *up to FOUR* features you would like any computer catalog to have:

a. Providing step by step instructions
b. Searching by any word or words in a title
c. Searching by any word or words in a subject heading
d. Limiting search results by date of publication
e. Limiting search results by language
f. Ability to search by journal title abbreviations
g. Ability to change the order in which items are displayed
h. Ability to view a list of words related to my search words
i. Ability to search for illustrations and bibliographies
j. Ability to search by call number
k. Ability to print search results
l. Ability to search a book's table of contents, summary or index
m. Ability to know if a book is checked out
n. Ability to tell where a book is located in the library
o. None

45. Select *up to FOUR* computer catalog service improvements you would like the library to make:

a. More terminals
b. Terminals at locations other than near the card catalog
c. Terminals at places other than library buildings
d. A chart of commands posted at the terminal
e. A manual or brochure at the terminal
f. An instruction manual for purchase
g. Training sessions
h. Slide/tape/cassette training program
i. None

46. Select *up to FOUR* kinds of material you would like to see added to the computer catalog:

a. Dissertations
b. Motion picture films
c. Government publications
d. Journal or magazine titles
e. Maps
f. Manuscripts
g. Music scores
h. Newspapers
i. Phonograph records or tapes
j. Technical reports
k. More of the library's older books
l. None
m. Other

Figure 12: Questions Regarding OLC Improvements on the User Qustionnaire

TABLE 66

Additional System Features Requested by Users

Question 44: *Select* up to FOUR *features you would like any computer catalog to have*:

Ranked by Frequency of Response[1]

h. Ability to view a list of words related to my search words	44.5%
l. Ability to search a book's table of contents, summary or index	41.9
m. Ability to know if a book is checked out	26.3
k. Ability to print search results	24.9
c. Searching by any word or words in a subject heading	24.3
a. Providing step by step instructions	23.6
f. Ability to search by journal title abbreviations	19.5
b. Searching by any word or words in a title	17.7
i. Ability to search for illustrations and bibliographies	17.4
n. Ability to tell where a book is located in the library	15.1
g. Ability to change the order in which items are displayed	11.5
d. Limiting search results by date of publication	11.2
e. Limiting search results by language	9.3
j. Ability to search by call number	8.4
o. None	4.8

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[1] Percentages sum to more than 100 due to legitimate multiple responses.

There is some overlap in these two sources for exclusion, but separate analyses have been run, one excluding libraries using the system variables, and the other excluding libraries using questionnaire mark-up information.

The features made available by some but not all systems are: (1) the ability to print search results, (2) sort capability, (3) online instruction and HELP facilities, (4) thesaurus or list of related words online, (5) limit results by date, (6) limit results by language, (7) freetext searching, (8) call number searching, (9) ability to know if a book is checked out, and (10) library location of a book.

Separate analyses were not run for the following categories of question 44: (1) ability to search by journal title abbreviation; (2) ability to search for illustrations; (3) ability to search a book's table of contents, summary, or index; and (4) none.

Separate analyses were not run for these categories because there was no information in the system profiles on these areas, and none of the library systems marked these as categories to be excluded.

The order of priority given to requested features changes when separate analyses are performed. The tendency is for the feature tested to move up in both rank and percentage when compared to its position in the aggregate frequency table. Needless to say, other categories are displaced, and this raises other questions about interpretation of the data. For instance, when the adjustment is made to exclude systems that offer call number search capabilities, the request for call number searching appears more urgent, moving the category to ninth place from fourteenth. For these systems, however, the category for step-by-step instructions is given an extremely low priority compared to its position in the aggregate frequency tables. Does this mean that call number searching is so difficult that users of these systems need more help? Or does it mean that systems without this capability for some reason have step-by-step instructions already available? Care must be taken when conclusions are drawn about data collected from this question.

When examining the data for each of the separate analyses, it must be remembered that systems with very different features and capabilities are still being brought together, and the only known similarity that they have to each other is the absence of one particular feature. For more specific evaluation of users' requests for improvement or addition of features, it is recommended that readers refer to the list of reports produced by the principals on analyses for the separate library systems.

Table 67 compares three different sets of data. The first column displays aggregate data, ranking the categories of question 44 in descending order, and showing the percentage of total responses in each category. (Percentages sum to more than 100 due to legitimate multiple responses.) The second column shows data from analyses in which libraries were excluded using system variables. For each category, data from libraries without that capability or feature were analyzed. Response categories were ranked, as in aggregate analyses. The table shows only the new position and the percentage of the particular category tested for, rather than the whole analysis, in order to allow for comparison of data. Column three shows data from analyses in which libraries were excluded using questionnaire mark-ups. These data are treated in the same way as in the second column.

Online Instruction. Response category 44A, providing step-by-step instructions, is ranked sixth in the aggregate analysis. However, when analysis is run excluding systems that already provide online step-by-step instructions and/or HELP imbedded in the dialogue, systems without this feature rank this category as third in importance, and the percentage of responses rises from 23.6 percent to 33.6 percent. When analysis is run excluding systems that requested 44A to be dropped from analyses, priority for addition of this feature again rises to third place, and percentage rises to 28.4 percent. Online instruction, therefore, is of higher priority to users of systems without it than it first appears to be.

FREETEXT searching. Response categories 44B and 44C both rise in priority when libraries are excluded using the system variable FREETEXT. The ability to search by any word or words in a title moves from eighth to fifth place. Examination of data from systems not dropping response category 44B shows that it rises in rank to sixth place. Data from systems not dropping 44C show this category rising to third place. Again, the data show that when analyses are run on systems lacking a particular feature, that feature appears to have a higher priority for users of those systems.

In all but one of the separate analyses, response category 44H, the ability to view a list of words related to my search words, remained on top, and 44L, ability to search a book's table of contents, summary, or index, was second. These two positions were reversed when analysis was done excluding systems that already had online instructions, but the difference in percentage of response is not particularly significant, and it is possible to conclude that overall, users give top priority to these two categories for improvement.

Availability of a book. In the aggregate frequencies, third place is given to category 44M, the ability to know if a book is checked out. This category remains as a high priority when data from systems not already offering this capability is examined. It drops down slightly in priority in some of the other analyses, but remains for the most part as an important request from users.

Printing capabilities. Response category 44K is given fourth place both in aggregate analysis and analysis done by excluding libraries using the system variable OLPRINT. When analysis is performed excluding libraries dropping 44K, this category is given third place.

Call number searching. Category 44J appears to have a low priority when examined in aggregate analysis. However, when examined in the context of those systems that do not offer this capability, call number searching rises in priority from fourteenth to ninth place, from 8.4 percent to 15.5 percent.

Sort capabilities, date and language limitations. Categories 44G, 44D, and 44E do not show significant changes when separate analyses are examined. All retain their status of low priority. Of the three, the ability to limit the search by date shows the most change, moving from twelfth to tenth place in the system variable analysis, with percentage of responses rising from 11.2 percent to 14.2 percent.

Location of book. Response category 44N, ability to tell where a book is located in the library, moves from tenth to sixth place when data from systems not dropping this category are examined.

CONCLUSIONS: Users give top priority to two categories: the ability to view a list of words related to search words, and ability to search a book's table of contents, summary, or index. Other priorities change depending on what capabilities a system already has or does not have. Printing capability, freetext searching, ability to tell if item is available, and online instruction are all considered high priority, each moving into third place in at least one of the separate analyses performed.

TABLE 67

Priorities for System Improvement, Adjusted for Existing System Capabilities

Question	Aggregate		Exclusion by System Variables		Exclusion by Q Mark-ups	
Category	Rank	%	Rank	%	Rank	%
44H	1	44.5	1	43.0		
L	2	41.9				
M	3	26.3				37.1
K	4	24.9	4	29.9	3	32.8
C	5	24.3	3	31.0	3	29.8
A	6	23.6	3	33.8	3	28.4
F	7	19.5				
B	8	17.7	5	23.3	6	22.1
I	9	17.4				
N	10	15.1			6	21.3
G	11	11.5	11	11.7		
D	12	11.2	10	14.2	11	15.2
E	13	9.3	13	10.1	13	9.9
J	14	8.4	9	15.5	14	10.5
O	15	4.8				

8.3 *IMPROVEMENTS TO LIBRARY SUPPORT SERVICES*

Question 45 lists eight library service improvements that could be made by the library. Examination of possible responses to the question shows that these improvements fall into two categories: (1) number and location of public access terminals and (2) availability of information and instruction. Table 68 ranks these improvements using aggregate data. The three responses that have to do with number and location of terminals are given higher priority than the responses that have to do with information and instruction.

Users would prefer to have a chart of commands posted at the terminal rather than to have a manual or brochure. Training sessions and A-V training programs are lower on the list. Very few users request that a manual be available for purchase.

TABLE 68

Library Service Improvements Desired by Users

Question 45: *Select* up to FOUR *computer catalog service improvements you would like the library to make*:

Ranked by Frequency of Response[1]

a.	More terminals	50.8%
c.	Terminals at places other than library buildings	34.9
b.	Terminals at locations other than near the card catalog	31.4
d.	A chart of commands posted at the terminal	29.1
e.	A manual or brochure at the terminal	20.1
i.	None	16.0
g.	Training sessions	13.8
h.	Slide/tape/cassette training program	11.1
f.	An instruction manual for purchase	8.4

[1] Percentages sum to more than 100 due to legitimate multiple responses.

8.4 IMPROVEMENTS TO THE OLC DATABASE

Question 46 lists eleven types of material that could be included in the computer catalog. Aggregate analysis of data collected from this question brings together computer catalogs that are widely different in scope and comprehensiveness of coverage. Using the questionnaire mark-ups as a source for excluding libraries, analyses were performed on each of the response categories, as described in the section on question 44. It is to be assumed that a library dropped a category from analysis only if *all* holdings in that medium had been converted to the computer catalog. Therefore, these analyses may be bringing together computer catalog systems that differ significantly in coverage.

Table 70 compares the results of the aggregate analysis with the results of the separate analyses in the same way that Table 1 displays data from question 44. Rank and percentage change from those in the aggregate analysis when systems with total catalog coverage of a specific medium are eliminated from analysis.

Journal or magazine titles. Response category 46D shows the most startling change. When systems that already have journals and magazines included in their catalog are eliminated, 46D moves from fourth to first place, and the percentage of responses rises from 22.8 percent to 52.4 percent, indicating that users of these systems consider this category to be of utmost importance.

More of library's older books. Response category 46K moves from third to first place for library systems that do not yet include all the library's books in the computer catalog. The percentage of responses rises from 25.6 percent to 39.0 percent.

Government publications. Response category 46C moves from second to first place, and the percentage rises from 28.3 percent or 30.5 percent.

Newspapers. Response category 46H remains on top when systems with newspapers included in their computer catalog are eliminated, with the percent of responses rising from 29.5 percent to 30.7 percent.

Dissertations. Response category 46A remains in fifth place, though the percent of responses rises slightly. This category occasionally moves into third or fourth place in some of the other analyses, showing it to be an even higher priority category for users of these systems.

Other response categories remain about the same as in the aggregate analysis.

TABLE 69

Additional Kinds of Material Requested by Users

Question 46: *Select* up to FOUR *kinds of material you would like to see added to the computer catalog*:

Ranked by Frequency of Response[1]

h.	Newspapers	29.5%
c.	Government publications	28.3
k.	More of the library's older books	25.6
d.	Journal or magazine titles	22.8
a.	Dissertations	21.0
i.	Phonograph records or tapes	20.4
j.	Technical reports	18.0
b.	Motion picture films	14.3
e.	Maps	14.1
l.	None	11.0
f.	Manuscripts	8.5
g.	Music scores	7.8
m.	Other	3.8

[1] Percentages sum to more than 100 due to legitimate multiple responses.

TABLE 70

Priorities for Additional Material, Adjusted for Database Inclusiveness

Question Category	Aggregate Rank	Aggregate %	Exclusion by Q Mark-ups Rank	Exclusion by Q Mark-ups %
46H	1	29.5	1	30.7
46C	2	28.3	1	30.5
46K	3	25.6	1	39.0
46D	4	22.8	1	52.4
46A	5	21.0	5	25.1
46I	6	20.4	6	20.4
46J	7	18.0	7	18.0
46B	8	14.3	6	20.5
46E	9	14.1	8	15.3
46L	10	11.0	10	11.0
46F	11	8.5	11	8.5
46G	12	7.8	10	11.2
46M	13	3.8	13	3.8

Chapter 9

DETERMINANTS OF USER SATISFACTION: AN EXPLORATORY ANALYSIS

9.1 WHAT REALLY AFFECTS USER SATISFACTION WITH THE ONLINE CATALOG?

In Chapter 7 we reported that most users are highly satisfied with the online catalog, and discussed the fact that satisfaction is related to frequency of use. In Chapters 5 and 6 we identified the most serious problems users had with the catalog and the library support system, and tried to idenfity the catalog features that appear to help or hinder users.

In this chapter we would like to begin pulling together the findings regarding user problems and user satisfaction. In designing a method to explore these relationships, however, we must recognize that:

- There are 28 questions about user problems in the Likert-scale portion of the questionnaire, and five questions about user satisfaction, or some 140 bivariate relationships among the two groups.

- There is considerable overlap among the Likert questions. For example, both Questions 13 and 17 are "about" subject searching, and Questions 16 and 27 both deal with problems in remembering search commands.

- The responses to Questions 11 through 38 are highly correlated. Of the 392 possible paired correlations in this group, 337 (86 percent) are correlated at r=0.10 or higher, and 32 (8.2 percent) have correlations greater than 0.30.

The first point suggests that the number of relationships to be examined must be reduced to a manageable level. The second and third points suggest that, both conceptually and mathematically, the Likert questions overlap considerably, and that data reduction is possible as well as necessary.

To test this possibility, we applied classical factor analysis to these 28 questions. Factor analysis is a statistical technique by which questions that are highly intercorrelated with each other are grouped together, and are simultaneously separated from other questions that are not highly correlated. For factor analysis to be judged successful in this case, it should reduce the 28 questions to a smaller number of factors such that a user who indicated a problematic response to one question in a factor-group would also tend to identify problems in the other questions in that group.

9.2 SEVEN KINDS OF PROBLEMS WITH ONLINE CATALOGS

For our present purposes, we judge the factor analysis to have been successful. Seven factors were extracted[17] from the 28 variables, and each seems to have a plausible explanation and a sensible relationship to the use of the online catalog. In Tables 71 to 77 we show the chief variables that compose each of the seven factors, along with their factor weights.[18]

9.2.1 *The "Factor Naming" Game*

It is not uncommon for factor analysts to engage in a pastime called "naming the factors." The desire to interpret the factor analysis substantively and to give the results labels more meaningful than "Factor 1" and "Factor 2" is understandable, but it should be recognized that factor weights are statistical artifacts, rather than direct measures of the named phenomenon, and that the "names" of factors come solely from the interpreters of the data in most cases.

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[17] Using the principal factoring method with iterations, and equimax orthogonal rotation. See, e.g., Harry H. Harman, *Modern Factor Analysis* (Chicago: University of Chicago Press, 1967) for a general introduction to factor analysis techniques, and Chapter 24 of Norman H. Nie, *et al*, *SPSS: Statistical Package for the Social Sciences*, Second Edition (New York: McGraw-Hill, 1975), for a detailed description of the techniques used for this analysis.

[18] Each of the 28 variables has a "factor weight" for each of the seven factors. The "factor weight," which ranges in value from +1 to -1, can be thought of as a correlation coefficient indicating the strength of the relationship between each variable and the factor as a whole. A large factor weight (either positive or negative) suggests that the variable makes a large contribution to the factor. Conventionally, factor weights greater than 0.30 (positive or negative) are considered to be "important" variables, and only variables with factor weights greater than this value are shown in Tables 71 to 77.

TABLE 71

Components of Catalog Use Factor 1

		Factor Weight
23.	Abbreviations on the screen are easy to understand.	0.719
22.	Using codes or abbreviations for searching is easy.	0.584
21.	Understanding explanations on the screen is difficult.	-0.358

TABLE 72

Components of Catalog Use Factor 2

		Factor Weight
28.	Understanding the initial instructions on the screen is difficult.	0.512
30.	Understanding the display that shows more than a single book, journal or magazine is difficult.	0.496
21.	Understanding explanations on the screen is difficult.	0.488
24.	Locating call numbers on the screen is difficult.	0.369
29.	Understanding the display for a single book, journal or magazine is easy.	-0.332
27.	Remembering the exact sequence or order of commands is easy.	-0.305

Having issued those warnings, we will now proceed to ignore our own advice

TABLE 73

Components of Catalog Use Factor 3

		Factor Weight
27.	Remembering the exact sequence or order of commands is easy.	0.522
16.	Remembering commands in the middle of the search is easy.	0.486
18.	Scanning through a long display (forward or backward) is easy.	0.419
33.	Knowing what is included in the computer catalog is easy to remember.	0.410
20.	Reducing the result when too much is retrieved is easy.	0.358
31.	Interrupting or stopping the display of information is easy.	0.337
34.	The order in which items are displayed is easy to understand.	0.329

TABLE 74

Components of Catalog Use Factor 4

		Factor Weight
17.	Finding the correct subject term is difficult.	0.659
13.	A computer search by subject is difficult.	0.599
19.	Increasing the result when too little is retrieved is difficult.	0.401
25.	Searching with a short form of a name or a word (truncation) is easy	-0.311

TABLE 75

Components of Catalog Use Factor 5

		Factor Weight
11.	A computer search by title is difficult	0.506
15.	A computer search by combined author/title is difficult	0.486
12.	A computer search by author is easy	-0.479
14.	A computer search by call number is easy	-0.455

TABLE 76

Components of Catalog Use Factor 6

		Factor Weight
36.	Selecting from a list of choices takes too much time.	0.497
35.	Displayed messages are too long	0.482
38.	The rate at which the computer responds is too slow.	0.408
42.	It is hard to find a free terminal	0.312

and play "name the factors." We venture to do this for three reasons:

- The factor-weighting results from this analysis are remarkably consistent and unambiguous, with few "stray" variables; the "names" to be discussed below derive considerable support from the data themselves.

TABLE 77

Components of Catalog Use Factor 7

	Factor Weight
40. Signs and brochures are not very useful.	0.579
39. The availability of signs and brochures is adequate.	-0.389
41. The staff advice is often not helpful.	0.343

- Because each factor is composed of both positively and negatively phrased Likert questions, the signs of the factor weights are important in understanding the "sign" or direction of the factor itself, a point that will become clear when we discuss each factor below. Our "factor names" are therefore useful to indicate the "sign" of each factor as well as its general subject.

- The naming of factors has considerable mnemonic value when the factor results are used in later analysis, as is the case here. The appearance of "Factor 1" in a correlation or regression analysis, for instance, often results in forcing the reader to flip back to earlier pages to find out what "Factor 1" is about.

9.2.2 FACTOR 1: Codes and Abbreviations are Easy to Understand and Use

Factor 1 is composed of three variables:

1. "Abbreviations are easy to understand" (Question 23) has a strong positive weighting of 0.719. Users who said abbreviations are easy to understand will have positive "scores" for Factor 1, and responses to this question are more important than those to other questions in determing where each user stands with regard to this factor.

2. "Using codes or abbreviations is easy" (Question 22) has a positive weight of 0.584.

3. "Understanding explanations on the screen is difficult" (Question 21) has a negative weighting of 0.358. Users who had problems here agreed with this statement (i.e., had a positive score). Users who disagreed with this statement (had a negative score) found it easy to understand explanations, and therefore had a positive "score" for Factor 1.

Respondents who indicated that they had no trouble understanding or using codes, abbreviations, or explanations tended, therefore, to have positive "scores" on Factor 1; thence the name, "Codes and Abbreviations are Easy to Understand and Use."

9.2.3 FACTOR 2: Displays are Hard to Understand

Factor 2 is composed of six variables:

1. "Understanding the initial instructions on the screen is difficult" (Question 28) has a factor weight of 0.512. Respondents who had difficulty here will have positive scores for Factor 2.

2. "Understanding [multiple-item displays] is difficult" (Question 30) has a factor weight of 0.496. Again, users who had difficulty will score positively on this factor.

3. "Understanding explanations on the screen is difficult" (Question 21) has a factor weight of 0.488. Note that this variable also appeared as a chief component of Factor 1. It appears that this question was eliciting responses of two kinds, one associated with the use of codes and abreviations in explanations (or perhaps the adequacy of messages in showing how to use or interpret codes and abbreviations), and one associated with the comprehensibility of such explanations, regardless of whether codes were involved.

4. "Locating call numbers is difficult" (Question 24) has a factor weight of 0.369. Users who had difficulty with this aspect of screen design score positively on Factor 2.

5. "Understanding the display for a single [item] is easy" (Question 29) has a negative weight of 0.332. Users who had no difficulty here will tend to have a negative score on Factor 2. It is interesting to note (although by no means conclusive) that problems with single-item displays have a considerably lower weighting for this factor than do problems with multiple-item displays.

6. "Remembering the exact sequence of commands is easy" (Question 27) has a negative factor weight of 0.305; respondents who had no difficulty here have negative scores for Factor 2. It is interesting that this question regarding command language appears in a factor related to catalog displays. The fact that it is mathematically related to users responses about display problems suggests that command and control designs should accord as much weight to display control as to search control.

Factor 2, then is composed of highly correlated responses to questions about screen displays of both bibliographic data and system interaction. One component is related to command language, suggesting that command and control of the displays, rather than (or in addition to) the search process, is an important problem for users. Respondents who had difficulty with displays tend to have a positive score, or loading, on this factor, lending it the name "Displays are Hard to Understand."

9.2.4 FACTOR 3: Command and Control is Easy

Factor 3 is composed of seven questions dealing principally with command language and control of the system. The components are:

1. "Remembering the exact sequence of commands is easy" (Question 27) has a positive factor weight of 0.552. This variable also appeared (with a lower weight) in Factor 2, regarding displays. Its presence here as the most highly-weighted variable suggests that control of displays is not the only command and control problem experienced by users, but that there is a more general dimension to this issue as well.

2. "Remembering commands...is easy" (Question 16) has a positive factor weight of 0.486. Respondents who said that it was easy to remember the right command have positive scores on this factor.

3. "Scanning through a long display...is easy" (Question 18) has a positive weight of 0.419. At first glance, one might expect this variable to belong with the "Displays" factor, but further consideration suggests that this questions deals with the ability to *control* the display, rather than with the ability to *understand* the information contained in it. The presence of this variable here reinforces our earlier interpretation of Factor 2; that aspect of command and control that involves controlling bibliographic displays is important to users.

4. "Knowing what is included is easy" (Question 33) has a positive weight of 0.410. This is one of the few "stray" variables in the fac-

tor analysis. It is unclear why responses to this question should be strongly associated with responses to questions that are clearly related to command and control.

5. "Reducing the result when too much is retrieved is easy" (Question 20) has a positive weight of 0.358. Clearly, this question involves a command and control issue, but it is unclear whether it implies problems with the system's *capability* to limit search results or with use of the *command structure* available to implement and control limiting features.

6. "Interrupting or stopping the display is easy" (Question 31) has a factor loading of 0.337. Respondents who found it easy to interrupt the display had positive scores on this factor.

7. "The order [of bibliographic display] is easy to understand" (Question 34) has a factor weight of 0.329. This is another "stray" variable, whose relationship to other variables in the factor is unclear.

Five of the seven variables in this factor deal with problems in remembering and entering commands and controlling the user's interaction with the online catalog. Respondents who had no difficulty with command and control have positive scores on this factor; for them, "Command and Control is Easy."

9.2.5 FACTOR 4: Subject Searching is Difficult

Factor 4 consists of four variables, two of which are specifically concerned with subject searching. The variables are:

1. "Finding the correct subject term is difficult" (Question 17) has a positive factor weight of 0.659. Respondents who had difficulty with this aspect of seaching have positive scores for Factor 4.

2. "A subject search is difficult" (Question 13) has a factor loading of 0.599. Users who had problems with subject searching have positive scores for this factor.

3. "Increasing the result when too little is retrieved is difficult" (Question 19) has a factor score of 0.401. Given that the two most heavily weighted variables in this factor are the two questions that deal specifically with subject searching, there is little doubt that Factor 4 is the "subject searching" factor. The presence of this variable (which is not explicitly related to subject searching) in this factor suggests that increasing the result is a special problem for subject searchers, perhaps because of difficulties in the search process, but perhaps

because known-item searchers are more inclined to "take the computer's word for it" that negative retrieval results are valid.

4. "Searching with truncation is easy" (Question 25) has a negative weighting of 0.311, showing that users who had trouble with truncation had positive scores on this factor. Again, the relation of this question to subject searching problems is unclear, suggesting only the possibilities that truncation is used more often in subject than in known-item searches, or that truncation for some reasons presents more problems in subject searches than at other times.

9.2.6 FACTOR 5: Known-Item Searching is Difficult

Factor 5 consists of 4 questions dealing with searches other than by subject, specifically:

1. "A search by title is difficult" (Question 11), with a factor weight of 0.506. Respondents who had problems with title searches have a positive score on this factor.

2. "A search by author/title is difficult" (Question 15), with a factor weight of 0.486.

3. "A search by author is easy" (Question 12), with a negative factor weight of 0.479. People who had difficulty with author searches have positive scores on this factor.

4. "A search by call number is easy" (Question 14), with a negative factor weight of 0.455.

This factor includes all four of the remaining questions dealing with searches of a specific form, and includes no extraneous variables. Because users who had difficulty with any one of these four kinds of search will have positive scores on this factor, we have named it "Known-Item Searching is Difficult."

9.2.7 FACTOR 6: The Computer Tries my Patience

Factor 6 consists of four variables having to do with time:

1. "Selecting from a list of choices takes too much time" (Question 36) has a factor weight of 0.497. Respondents who agreed with this statement have positive scores on this factor.

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2. "Displayed messages are too long" (Question 35) has a factor weight of 0.482.

3. "The response rate is too slow" (Question 38) has a factor weight of 0.408.

4. "It is hard to find a free terminal" (Question 42) has a factor weight of 0.312. This is the only question in the group that makes no specific mention of time, duration, or length; nonetheless, problems of time, waiting, and patience are implicit in the responses of those who said they found it difficult to get to a terminal when they wanted one.

Factor 6 includes all those questions that involve time, duration, and waiting, and features no extraneous variables. Because users who had problems in these areas have positive scores on these factors, it is evident that these are users for whom "The Computer Tries my Patience."

9.2.8 FACTOR 7: Library Services are not Helpful

Factor 7 is composed of the three Likert variables that deal with library services, rather than aspects of the catalog system itself:

1. "Signs and brochures are not very useful" (Question 40) has a factor weight of 0.579. Users who found little value in printed aids score positively on this factor.

2. "Availability of signs and brochures is adequate" (Question 39) has a negative factor weight of 0.389. Users who could get printed aids when they needed them have negative scores on this factor.

3. "The staff advice is often not helpful" (Question 41) has a factor loading of 0.343.

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9.3 CATALOG USE FACTORS AND USER SATISFACTION

9.3.1 Using Factor Scores

The factor analysis described in the preceding section succeeds in reducing 28 questions about system problems to seven interpretable factors. How, then, can the factor analysis be used to illuminate the sources of user satisfaction and dissatisfaction with the online catalog?

As the language of the previous section suggested, it is possible to compute a "factor score" for each respondent for each of the seven factors. The "factor score" is computed by multiplying the user's numerical response to each component question by the factor weight for each question, and summing the results. To compute a respondent's factor score for Factor 1 (Codes and Abbreviations are Easy to Understand and Use), for example, one need only:

1. Multiply the user's response to Question 23 by 0.719 (remember that the Likert questions are represented numerically by integer scores ranging from -2 for "Strongly Disagree" to +2 for "Strongly Agree").
2. Multiply the response to Question 22 by 0.584.
3. Multiply the response to Question 21 by -0.358.

One then simply sums the results of these three operations to derive the factor score.[19]

With these techniques, seven factor scores were computed for each questionnaire, and used in subsequent analysis.

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[19] In practice, the SPSS system takes a more comprehensive approach, first by using all factor weightings in the computation (not just those over 0.3), and second by making provisions for missing responses in computation of a score. For this procedure, we assumed that missing values would resemble the valid values in similar nonmissing cases and used the SPSS procedure that uses weighting of the nonmissing values to compute the factor scores when some variables have missing responses. See Nie, op. cit., for details of this procedure.

9.3.2 *Methodology*

Using the seven factor-score variables in place of the 28 Likert variables, it is now possible to consider methods of relating system problems to search satisfaction. For this analysis, we chose to use the technique of multiple linear regression, in part because the data themselves are in a form to permit use of this powerful statistical method, and in part because of our interest in controlling for other characteristics of the user and the system, for which purpose multiple regression is well suited.

Earlier analysis has shown that some demographic variables, particularly prior OLC experience, have an influence on satisfaction. Therefore, we wished to include demographic data (specifically, questions 49 to 55) in the analysis.[20]

Previous analysis also emphasized the search for specific system features that might contribute to the success or failure of the search. We therefore included data on the full range of system features in the regression analysis.[21]

Finally, previous findings have suggested that the size and scope of the online catalog database is an important consideration in search success, so three database variables are included as well.

The technique used, then, was stepwise multiple linear regression using seven factor scores, seven demographic variables, three database variables, a number of system features as independent variables, and the five satisfaction measures as dependent variables.

In the sections that follow, regression results are displayed and discussed for each of the five measures of satisfaction. Results are displayed in the order that variables entered into the stepwise regression procedure, which is generally the order from the greatest to the least correlation with the dependent variable, or roughly, from the greatest to the least importance. Only variables with a statistical reliability of 0.05 or better are shown. Variables that are not included in an equation have no statistically reliable relationship to the measure of interest. Thus, what is *not* included in the regression analysis is in many ways as important as what does appear in each equation.

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[20] Note that most of the demographic questions are not measured on an interval scale, and therefore by rigorous standards are not suitable for direct inclusion in a regression analysis. They were included here principally in order to find whether they made a difference in satisfaction, when system variables were also included, and the analysis is well suited to that end. The reader is cautioned, however, not to take the regression coefficients too literally because of the approximate nature of this analysis.

[21] The system feature variables are all binary (i.e., have values of either 0 or 1), and are therefore perfectly suited to regression applications by any analytical standard.

Each of the following tables also presents an R^2 statistic for the regression equation. R^2 is a measure of multiple correlation, generally interpreted as "the percentage of variance in the dependent variable accounted for (or "explained") by the independent variables." When, for example, we see that the 16-variable regression on Question 5, "In this computer search I found...," has an R^2 of 0.961, we can interpret the result as showing that these 16 variables, taken together, account for about 9.6 percent of the variance in responses regarding retrieval results. The remaining 90.4 percent is not accounted for in the analysis. Adding additional variables would not add appreciably to R^2; they would not be "statistically significant." The "unexplained" variance is exactly that: unexplained. Thus we may say that the 16 variables in that equation have a proven statistical relationship to retrieval results, but that most of the variance in users' retrieval success is caused by factors that are not included in this analysis.

9.3.3 The Easier It Is to do Subject Searching, the More Relevant Material is Retrieved

Table 78 shows the result of regressing the group of independent variables on Question 5, "In this computer search I found:". As noted in the previous examples, the 16 variables included here, taken together, explain only about 10 percent of the variance in retrieval success (R^2=0.916). Clearly, an attempt to describe the determinants of retrieval success in detail must include more information about the system, the user, and the search than was obtained in the present study.

The variables shown by regression analysis to be important to the amount of material retrieved are discussed below, in the order in which they entered the regression analysis.

1. *Factor 4, "Subject Searching Is Difficult"* (*+0.20179*). Recall that a positive score on Factor 4 indicates that subject searching was a problem. Note from Table 78 that a "positive" (in this case, a numerically larger) score indicates that less was retrieved. Factor 4's positive coefficient indicates that the greater the difficulty with subject searching, the less was retrieved. The converse, of course, is also true: the less difficulty with subject searching, the more is retrieved.

2. *SELMODE, the ability to select search modes* (*+0.24564*). Because the coefficient of SELMODE is positive, the presence of this feature (de-

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TABLE 78

Determinants of Amount Retrieved

DEPENDENT VARIABLE: 5. *In this computer search I found*:
1. More than I was looking for
2. All that I was looking for
3. Some of what I was looking for
4. Nothing I was looking for

Step	*Variable*	*Coefficient*	*Significance of t*	*Cumulative R^2*
1	FACTOR04	0.20179	0.0000	0.0309
2	SELMODE	0.24564	0.0000	0.0504
3	FACTOR03	-0.10336	0.0000	0.0603
4	DISPB_F	0.11636	0.0242	0.0670
5	FACTOR07	0.09579	0.0000	0.0743
6	RQ49	0.05536	0.0000	0.0799
7	FACTOR06	0.08719	0.0000	0.0833
8	FACTOR05	0.07698	0.0000	0.0860
9	RQ48	0.04683	0.0000	0.0884
10	SUBJECT	0.28033	0.0000	0.0898
11	DISRUPT	0.09927	0.0013	0.0911
12	FACTOR01	-0.05353	0.0009	0.0925
13	RQ51	0.01676	0.0078	0.0935
14	RQ50	-0.02868	0.0068	0.0944
15	OTHERMDE	-0.15384	0.0106	0.0953
16	FACTOR02	-0.04389	0.0191	0.0961
	(CONSTANT)	1.88306	0.0000	

noted by a "1" in the data) would appear to lead to a *reduction* in retrieval results. Only five systems in the group possess this capability, and 65 percent of the questionnaires representing these systems come from the University of California. It may be that the database limitations of the UC system constrain retrieval results, and that the UC data thereby indirectly affect the relation of SELMODE to retrieval results.

3. *Factor 3, "Command and Control is Easy"* (*-0.10336*). The negative coefficient indicates that the more difficulty users experience with command and control, the less relevant material they retrieve.

4. *DISPF_B, the capability to move forward and backward in a long display* (*+0.11636*). The sign of the coefficient indicated that systems having this feature offer less adequate retrieval results.

5. *Factor 7, "Library Services are not Helpful"* (*+0.09579*). The less adequate the library support services, in the judgment of the user, the less relevant material is retrieved.

6. *Question 49, frequency of computer catalog use* (*+0.05536*). As the numerical value of the response to Question 49 increases (that is, as use of the online catalog is less frequent), the numerical value of Question 5 increases (that is, less is found). As noted in a previous chapter, the greater the user's experience with the computer catalog, the greater the likelihood of finding relevant material.

7. *Factor 6, "The Computer Tries my Patience"* (*+0.08719*). The result shows that, the fewer problems users have with gaining access to a terminal or waiting for the computer to respond, the greater their retrieval results.

8. *Factor 5, "Known-Item Searching is Difficult"* (*+0.07698*). The sign of the coefficient shows that the more difficulty users have with known-item searching, the less is retrieved.

9. *Question 48, frequency of library use* (*+0.04683*). Frequent library users are more likely to find relevant material than infrequent users.

10. *SUBJECT, the system capability to search by subject* (*+0.28033*). The finding indicates, somewhat paradoxically, that users find less in systems that *have* subject searching capability than in systems that do not. It should be noted, however, that the only participating system for which subject searching capability is *not* present is OCLC used as a public access system. It may be that the effect of the large OCLC data base on retrieval success, rather than the effect of subject search capability, is what is measured here.

11. *DISRUPT, the ability to interrupt the online display* (*+0.09927*). According to the sign of the coefficient, the ability to interrupt output has a diminishing effect on retrieval results. It should be noted that about 83 percent of the observations for systems having this capability are from two places, the University of California and Syracuse University, both of which have incomplete databases. The inclusion of this variable, like that of SUBJECT, may simply be an artifact of database size.

12. *Factor 1, "Codes and Abbreviations are Easy to Understand and Use"* (*-0.05353*). The sign of the coefficient indicates that, the easier it is to use codes and abbreviations, the more relevant material is retrieved.

13. *Question 51, computer experience* (*+0.01676*). The sign indicates that users who have more experience with computers other than the OLC tend to retrieve more of what they are looking for.

14. *Question 50, frequency of use of the card catalog* (*-0.02868*). The sign indicates that frequent users of the card catalog are less likely to find what they want in the OLC than are infrequent card catalog users.

15. *OTHERMDE, the system capability to search other than by command or menu modes* (*+0.15384*). The sign shows that the provision of search modes other than command or menu aids retrieval. Only one participating system, Dallas Public Library, indicated to us that they provided an "other" search mode, so this result may be an artifact of other characteristics of the Dallas Public system that provide larger retrieval results for ts users.

16. *Factor 2, "Displays are Hard to Understand"* (*-0.04389*). The sign indicates that, where displays are difficult to understand, *more relevant information* is retrieved by users. We have no interpretation for this curious finding.

9.3.4 Easy Subject Searching Improves Search Satisfaction

Table 79 displays the regression results with Question 6, "In relation to what I was looking for, this search was," as the dependent variable. The fourteen variables included in the regression explain about 14 percent of the variance in satisfaction with the search (R^2=0.1359). This is not, of course, a large amount of explained variance, but R^2 is greater for this regression model than for the previous model related to retrieval results.

The variables that are related to satisfaction with the search just completed, in the order they entered the stepwise analysis, are:

1. *Factor 4, "Subject Searching is Difficult"* (*+0.22600*). The fewer problems users experience with subject searching, the more favorable is their evaluation of the most recent search.

2. *Factor 7, "Library Services are not Helpful"* (*+0.14322*). The less satisfying users found library support services, the less satisfactory is their evaluation of the search.

TABLE 79

Determinants of Satisfaction with the Search

DEPENDENT VARIABLE: *6. In relation to what I was looking for, this computer search was*:

1. Very satisfactory
2. Somewhat satisfactory
3. Somewhat unsatisfactory
4. Very unsatisfactory

Step	*Variable*	*Coefficient*	*Significance of t*	*Cumulative R^2*
1	FACTOR04	0.22600	0.0000	0.0439
2	FACTOR07	0.14322	0.0000	0.0619
3	FACTOR03	-0.12250	0.0000	0.0789
4	FACTOR05	0.14995	0.0000	0.0923
5	SELMODE	0.36817	0.0000	0.1041
6	FACTOR06	0.12492	0.0000	0.1112
7	STACKCOM	0.24629	0.0000	0.1178
8	RQ49	0.06999	0.0000	0.1233
9	RQ50	-0.05231	0.0000	0.1277
10	FACTOR01	-0.08209	0.0000	0.1312
11	SORT	-0.24755	0.0001	0.1339
12	OLINSTR	0.13841	0.0002	0.1352
13	ACCESS#	0.07149	0.0311	0.1359
	(CONSTANT)	1.49389	0.0000	

3. *Factor 3, "Command and Control Is Easy"* (-0.12250). The fewer problems users had with command and control, the more likely they are to rate their search as satisfactory.

4. *Factor 5, "Known-Item Searching Is Difficult"* (+0.14995). The fewer problems users had with known-item searching, the better they rated the most recent search.

5. *SELMODE, the ability to select search modes* (+0.36817). The presence of this capability tends to lead to unsatisfactory evaluations, in much the same way as it affected retrieval results (Table 78). As

noted in the previous discussion of this variable, its effect may be attributable to the database limitations of the University of California system.

6. *Factor 6, "The Computer Tries my Patience"* (*+0.12492*). Users who had problems with computer response or terminal accessibility tend to rate their last search as unsatisfactory.

7. *STACKCOM, the catalog feature that allows the user to "stack" a series of commands for sequential execution* (*+0.24629*). The command-stacking feature has a negative effect on user evaluations. It may be that applying this feature confuses OLC users, but it should be noted that only three systems, Ohio State, Stanford (RLIN II), and Syracuse, have this capability. It may be that the negative effect measured here is caused indirectly by other aspects of those three systems that lower user evaluations.

8. *Question 49, frequency of computer catalog use* (*+0.06999*). As in the previous regression model, frequent computer catalog experience leads to higher evaluations of the most recent search.

9. *Question 50, frequency of use of the card catalog* (*-0.02868*). People who use the card catalog frequently appear to have a less satisfactory experience with the OLC.

10. *Factor 1, "Codes and Abbreviations are Easy to Understand and Use"* (*-0.08209*). The less difficulty people experience with codes and abbreviations, the more satisfactory their search.

11. *SORT, the ability to resort and redisplay retrieval results* (*-0.24755*). The sorting capability appears to be associated with search satisfaction.- It should be noted, though, that only one system, Minnesota State (Mankato) has this feature, so its appearance here might be caused indirectly by significantly high overall satisfaction with that one system, rather than by the feature itself.

12. *OLINSTR, the provision of interactive instruction in OLC use as part of the catalog* (*+0.13841*). The sign of the coefficient suggests that online instruction reduces user satisfaction. The results lead to several possible interpretations, among them (1) that online instruction is time-consuming, and tries the patience of users, especially those who do not need instruction, or (2) that the manner in which instructions are presented, rather than the mere provision of the feature, causes more harm than good. We note, however, that this variable does not indicate whether online instruction was used, only that the feature is present. Explication of this finding will require more detailed analysis of the data.

13. *ACCESS#, the capability to search by local accession number* (*+0.07149*). The provision of this capability has a negative effect on user evaluations. Six systems offer this capability, suggesting that the finding is not merely an artifact of otherwise unmeasured system differences. This result may suggest that providing explicit access to technically-defined fields in a public access system creates confusion for catalog users, but only further analysis could illuminate this possibility.

9.3.5 When Subject Searching Is Easy, Users are More Likely to Come Across Other Things of Interest

Table 80 shows the regression results with Question 7, "I came across things of interest other than what I was looking for," as the dependent variable. This is the least successful of the group of regressions in explaining the phenomenon of interest; the fourteen variables in the regression together explain only about five percent of the variance in "serendipity" (R^2=0.0482). Clearly, factors other than system problems, system capabilities, and demographic characteristics play the predominant role in determining whether users find relevant but unexpected material.

The variables explaining "serendipity," in order of entry into the stepwise equation, are:

1. *Factor 4, "Subject Searching Is Difficult"* (*+0.07078*). The more difficult the subject-searching experience, the less likely that users will find unexpected things of interest.

2. *AU_TI, the system capability to conduct combined author-title searches* (*-0.15221*). The presence of a combined author-title search capability appears to enhance the chances of a serendipity experience. Given that an author-title search is by definition more precise than either of its components, the fact that this feature promotes accidental discovery is surprising. It seems likely that only additional research on this point could clarify the matter.

3. *DISRUPT, the ability to interrupt the online display* (*+0.02960*). As with the amount of material retrieved (Table 78), the presence of the capability to interrupt output appears to have a negative effect. The reasons discussed previously may apply here as well.

4. *Factor 3, "Command and Control Is Easy"* (*-0.04121*). The fewer problems users have with command and control, the more likely they are to find unexpected things of interest.

TABLE 80

Determinants of Unexpected Discovery of Relevant Material

DEPENDENT VARIABLE: *7. I came across things of interest other than what I was looking for*:

1. Yes
2. No

Step	*Variable*	*Coefficient*	*Significance of t*	*Cumulative R^2*
1	FACTOR04	0.07078	0.0000	0.0163
2	AU_TI	-0.15221	0.0000	0.0230
3	DISRUPT	0.02960	0.0714	0.0300
4	FACTOR03	-0.04121	0.0000	0.0338
5	RQ49	0.02618	0.0000	0.0365
6	STACKCOM	0.04716	0.0052	0.0397
7	TERMTOT	-0.00006	0.0001	0.0412
8	RQ55	-0.03376	0.0102	0.0424
9	DISPB_F	0.05691	0.0030	0.0435
10	FACTOR06	0.02705	0.0047	0.0447
11	RQ51	0.00827	0.0169	0.0456
12	RQ54	0.01309	0.0197	0.0464
13	FACTOR02	-0.02501	0.0133	0.0473
14	FACTOR07	0.02445	0.0176	0.0482
	(CONSTANT)	1.48040	0.0000	

5. *Question 49, frequency of computer catalog use (+0.02618)*. People who use the computer catalog frequently are more likely to discover relevant material by serendipity.

6. *STACKCOM, the catalog feature that allows the user to "stack" a series of commands for sequential execution (+0.04716)*. The presence of the command stacking feature appears to have a negative effect on serendipity, just as it did with evaluation of the most recent search (Table 79). As noted previously, the presence of this variable may be related to other characteristics of the three systems supporting this feature, rather than to the feature itself.

7. *TERMTOT, the total number of public-access terminals available (-0.0006).* The more terminals, the more serendipity. The reasons are unclear, but it is possible that more terminals mean less queuing, and users who are not pressured to leave the terminal to the next user in line may take more time for their session and be more likely to discover unexpected items.

8. *Question 55, the sex of the user (-0.03376).* Recalling that women have the numerical value "0" on this variable, and men the value "1", the sign of the coefficient indicates that men are more likely than women to discover unexpected things of interest.

9. *DISPF_B, the capability to move forward and backward in a long display (+0.05691).* As was the case with retrieval results (Table 78), the ability to control long displays has a negative effect on serendipity. See the earlier discussion of this variable.

10. *Factor 6, "The Computer Tries my Patience" (+0.02705).* Users who are impatient with the OLC or unable to find a free terminal are less likely to find unexpected things of interest.

11. *Question 51, computer experience (+0.00827).* Experience with computer systems other than the OLC promotes serendipity.

12. *Question 54, the age of the respondent (+0.01309).* As the respondent's age increases, the numerical value of the response to Question 7 increases, that is, older respondents are less likely to find unexpected things of interest.

13. *Factor 2, "Displays are Hard to Understand" (-0.02445).* This variable last appeared in the equation for Question 5 (Table 78), where we saw that confusing displays apparently promoted increased retrieval. Here again, the more problems users have understanding the display, the more likely they are to find unexpected items. Perhaps, perversely, the time and effort required to decipher confusing displays promotes serendipity; when displays are clear and simple, the needed item may be found easily and other, potentially relevant, items overlooked.

14. *Factor 7, "Library Services are not Helpful" (+0.02445).* The more that library users perceive library support services as helpful, the more likely they are to find unexpected things of interest.

9.3.6 *Subject Searching Problems Have an Important Effect on Overall Attitude Toward the OLC*

Table 81 displays the results of a regression with Question 9, "My overall or general attitude toward the computer catalog," as the dependent variable. The eighteen variables included in the regression account for over 20 percent of the variance in expressed attitudes toward the OLC ($R^2=0.2044$). The first five variables in the equation are all system factors; together they account for 3/4 of the explained variance in the 18-variable regression (cumulative R^2 for variables 1-5 is 0.1547). Obviously, the perceived quality of the system and the user interface is an important factor in users' judgment of the catalog.

The variables in the regression equation related to overall satisfaction, in order of entry in the stepwise regression procedure, are:

1. *Factor 4, "Subject Searching is Difficult" (+0.17399).* When subject searching is perceived as easy, evaluations of the OLC tend to be more positive.

2. *Factor 5, "Known-Item Searching is Difficult" (+0.16354).* Problems in known-item searching are second only to subject searching problems as determinants of overall attitude. When known-item searching is easy, evaluations are more favorable.

3. *Factor 7, "Library Services are not Helpful" (+0.14155).* Searching factors are followed by the quality of library services in determining user satisfaction with the OLC. When library support is judged adequate, evaluations improve.

4. *Factor 1, "Codes and Abbreviations are Easy to Understand and Use" (-0.09348).* The less difficulty users have with the catalog's abbreviations and codes, the more positive is their overall attitude toward the catalog.

5. *Factor 6, "The Computer Tries my Patience" (+0.09625).* Users' patience with the time-consuming habits of some OLC's is an important factor in overall satisfaction. The more impatient users become, the lower their overall evaluation.

6. *Question 50, frequency of use of the card catalog (-0.06531).* Frequent experience with the card catalog has a negative effect; heavy card catalog users tend to make more negative evaluations.

7. *Question 49, frequency of computer catalog use (+0.05597).* As in previous cases, the more frequently the OLC is used, the more favorable is the user's evaluation of it.

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TABLE 81

Determinants of Overall Satisfaction with the Online Catalog

DEPENDENT VARIABLE: *9. My overall or general attitude toward the computer catalog is*:

1. Very favorable
2. Somewhat favorable
3. Somewhat unfavorable
4. Very unfavorable

Step	*Variable*	*Coefficient*	*Significance of t*	*Cumulative* R^2
1	FACTOR04	0.17399	0.0000	0.0542
2	FACTOR05	0.16354	0.0000	0.0923
3	FACTOR07	0.14155	0.0000	0.1225
4	FACTOR01	-0.09348	0.0000	0.1447
5	FACTOR06	0.09625	0.0000	0.1547
6	RQ50	-0.06531	0.0000	0.1632
7	RQ49	0.05597	0.0000	0.1714
8	ACCESS#	0.06252	0.0422	0.1814
9	FACTOR03	-0.06343	0.0000	0.1887
10	RQ54	0.02865	0.0000	0.1935
11	FACTOR02	0.05096	0.0000	0.1957
12	THESAUR	-0.07770	0.0007	0.1976
13	RQ55	-0.05218	0.0007	0.1995
14	SUBJECT	0.11420	0.0845	0.2011
15	OTHERAC	-0.11751	0.0000	0.2026
16	BCKSPACE	-0.10767	0.0001	0.2031
17	OLINSTR	-0.07828	0.0250	0.2038
18	CALL#	0.06725	0.0274	0.2044
	(CONSTANT)	1.45633	0.0000	

8. *ACCESS#, the capability to search by local accession number (+0.06252)*. As was the case with evaluation of the most recent search (Table 79), the presence of this capability has a negative effect on the overall evaluation of the catalog.

9. *Factor 3, "Command and Control is Easy"* (*-0.06343*). The ability to control the computer session easily leads to a more positive evaluation of the online catalog.

10. *Question 54, the age of the respondent* (*+0.02865*). Older users are less likely to evaluate the OLC positively.

11. *Factor 2, "Displays are Hard to Understand"* (*-0.05096*). As contrasted with previous cases where Factor 2 has appeared in the regression equation (amount retrieved, Table 78, and "serendipity," Table 80), good displays have good results in terms of overall evaluation. When users have trouble understanding displays and messages, evaluations drop.

12. *THESAURUS, the provision of thesauri or indices that can be searched and displayed* (*-0.07770*). The thesaurus feature appears for the first time in this regression, and it appears in an affirmative way. Systems that provide this feature tend to get higher overall evaluations than systems that do not.

13. *Question 55, the sex of the user* (*-0.05218*). Male respondents are significantly more likely to give the OLC a favorable rating than are female respondents.

14. *SUBJECT, the system capability to search by subject* (*+0.11420*). As was the case with the regression analysis of retrieval results (Table 78), it appears that systems offering subject search capabilities get lower evaluations than systems without this feature. A potential bias with regard to this feature (only one system lacks this capability) was discussed earlier, and will not be repeated here. Note also, that the significance of the T-statistic for this variable is relatively low (t=0.0845), and by most standards this variable would be rejected as a statistically significant regressor.

15. *OTHERAC, the provision of access points other than those named in the system profile questionnaire* (*-0.11751*). The seven systems that offer access points in addition to author, title, subject, call number, accession number, ISSN and ISBN, LC card number, series, or added entries generally receive higher evaluations.

16. *BCKSPACE, the provision of a means to edit or correct keying errors* (*-0.01767*). The five systems that make no provision to correct typing errors (typically by spacing back and typing over) are generally evaluated less favorably.

17. *OLINSTR, the provision of interactive instruction in OLC use as part of the catalog* (*-0.07828*). The provision of online instruction ap-

peared to be a disadvantage with regard to ratings of the success of the most recent search (Table 79). With respect to overall evaluation of the OLC, however, systems with online instruction are generally more favorably received than those without this feature.

18. *CALL#, the capability to search by call number* (*+0.06725*). Systems that provide call number searching are generally rated less highly than those without this feature.

9.3.7 Catalog Preference Is Chiefly Determined by Frequency of Use of the Card Catalog

As Table 82 shows, the most important determinant of preference for the card as opposed to the computer catalog is frequency of card catalog use (Question 50). Frequent users of the card catalog prefer it to the OLC. This is the only regression equation in which Factor 4, subject searching, is not the most important single variable, but in this case Factor 4 does come in a close second. The sixteen variables in this regression account for about 16 percent of the variance in card/computer preference (R^2=0.1580).

The sixteen variables explaining preference for the computer catalog are:

1. *Question 50, frequency of use of the card catalog* (*-0.10240*). Frequent users of the card catalog are less likely to prefer the OLC.

2. *Factor 4, "Subject Searching Is Difficult"* (*+0.12999*). Where subject searching is perceived as a problem, users tend to prefer the card catalog.

3. *Factor 7, "Library Services are not Helpful"* (*+0.10772*). When library support services for the OLC are deemed inadequate, the card catalog gets a higher rating.

4. *Factor 5, "Known-Item Searching Is Difficult"* (*+0.09570*). Where searching for known items is judged difficult, the card catalog is preferred.

5. *Question 49, frequency of computer catalog use* (*+0.04987*). People who use the OLC frequently are more likely to prefer it to the card catalog.

6. *Factor 6, "The Computer Tries my Patience"* (*+0.08569*). Users who have difficulty finding a free terminal or who feel that the computer takes too long to respond tend to prefer the card catalog.

TABLE 82

Determinants of Preference for Computer and Card Catalogs

DEPENDENT VARIABLE: *10. Compared to the card, book, or microfiche catalog in this library, the computer catalog is*:

1. Better
2. About the same
3. Worse

Step	*Variable*	*Coefficient*	*Significance of t*	*Cumulative* R^2
1	RQ50	-0.10240	0.0000	0.0469
2	FACTOR04	0.12999	0.0000	0.0794
3	FACTOR07	0.10772	0.0000	0.1013
4	FACTOR05	0.09570	0.0000	0.1139
5	RQ49	0.04987	0.0000	0.1223
6	FACTOR06	0.08569	0.0000	0.1310
7	FACTOR01	-0.06384	0.0000	0.1377
8	SAVESETS	-0.60438	0.0000	0.1418
9	RQ54	0.03400	0.0000	0.1455
10	SUBJECT	0.33968	0.0000	0.1479
11	LCCARD	0.10971	0.0000	0.1494
12	SORT	-0.47652	0.0000	0.1520
13	OTHER	0.09061	0.0000	0.1543
14	FACTOR03	-0.03197	0.0029	0.1558
15	LANGLIM	0.31051	0.0032	0.1568
16	SERIES	0.05071	0.0032	0.1580
	(CONSTANT)	0.84943	0.0000	

7. *Factor 1, "Codes and Abbreviations are Easy to Understand and Use"* (*-0.06384*). Users who do not have problems understanding and using codes and abbreviations tend to prefer the computer catalog.

8. *SAVESETS, the capability to save and recombine intermediate search results* (*-0.60438*). This capability appears to result in a greater preference for the OLC. According to the Computer System Profile questionnaires, only the Library of Congress system had this feature, so there may be other condidtions at LC that affect this pre-

ference for the MUMS/SCORPIO system, rather than the virtues of the SAVESETS feature itself.

9. *Question 54, the age of the respondent* (*+0.03400*). Older respondents are more likely to prefer the card catalog.

10. *SUBJECT, the system capability to search by subject* (*+0.33968*). The presence of the subject-searching feature appears to imply a greater preference for the card catalog. As noted earlier, this may be an artifact associated with the one system (OCLC) that does not offer subject searching.

11. *LCCARD, the capability to search by Library of Congress card number* (*+0.10971*). In systems that offer the capability to search by LCCN, users tend to prefer the card catalog. About half the systems in the study offer this feature, so it is apparently not an artifact. It may be that, as with accession-number searching, the provision of access to this rather esoteric entry point in a public system leads to some complexity and confusion from the user's point of view.

12. *SORT, the ability to resort and redisplay retrieval results* (*-0.47652*). In systems having this feature, the computer catalog tends to be preferred over the card catalog, as was the case with search satisfaction (Table 79). As noted there, only one system has this feature, so the positive relationship may be a system-specific artifact.

13. *OTHER, the amount of material in formats other than books and serials included in the online catalog* (*+0.09061*). This is the only instance when a measure of completeness of the database enters directly into a regression model, and its effect, surprisingly, is negative. It should be noted that only seven libraries, representing four participating systems, claim to have all their "other" material in their database, so the effect measured here may be an artifact. It may also be the case that, while including multiple formats in the catalog is good, the provisions of specific systems to aid users in locating materials in multiple formats are not adequate, leading to some frustration when they actually try to search for holdings of, say, sound recordings or musical scores.

14. *Factor 3, "Command and Control is Easy"* (*-0.03197*). When users find it easy to control their catalog session, they tend to prefer the computer catalog.

15. *LANGLIM, the capability to limit search results by language of publication* (*+0.31051*). Systems with language-limiting capabilities apparently are not as preferred by users as systems without this feature.

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The three systems with this capability (Minnesota, Dartmouth, and Library of Congress) are principally academic and research libraries, however, so the measured effect may be an artifact of a more general preference of academic users for the card catalog.

16. *SERIES, the capability to search by series name* (*+0.05071*). The presence of this feature depresses user preference for the OLC. About half the participating systems offer this capability, so it is unlikely to be an artifact. As with some other system features appearing in the regression analyses, it may be that providing this search point serves to confuse, rather than aid, the general public.

9.4 SUMMARY OF THE FACTOR/REGRESSION ANALYSIS

9.4.1 Catalog Use Factors

In the five regression analyses reported here, the seven factor variables measuring problems with the OLC system and with library support for the OLC have played a major role. All or most of the factors appear in every regression equation, and in all cases the results show that where interface and support problems are perceived as serious, the user's evaluation of the online catalog suffers.

9.4.2 Characteristics of Library Users

9.4.2.1 Demographic Factors

The analysis shows that, when other factors are controlled, demographic characteristics of users (age and sex) have a small but significant predisposing influence on user evaluations. Specifically, older users and women are specifically less likely to evaluate the OLC highly or prefer it to the card catalog.

Other demographic characteristics (education level, academic status and affiliation in academic libraries) were not included in this analysis because the scaling of these data was not suitable for direct inclusion in a regression analysis, but the predisposing influence of demographic variables suggests that additional analytical work with these additional demographic variables would be worthwhile.

9.4.2.2 Library Use Factors

All four characteristics of library and computer use (frequency of library use, OLC use, card catalog use, and use of non-library computers) appear in the analysis at one place or another. Of these, the most important appear to be frequency of use of the computer catalog, in which more frequent users tend to favor the OLC, and frequency of use of the card catalog, in which more frequent users tend to prefer the card catalog. As noted in an earlier chapter, there are obvious elements of self-selection here, and perhaps the best we can say is that users tend to prefer the catalog they know best. It is, however, important to note that the demographic factors have an influence on satisfaction and preference that is *independent* of the effect of system quality, suggesting that, while system improvements will certainly improve user satisfaction, there is an element of "bibliographic predisposition" that perhaps cannot be directly reached by improved systems or support services.

9.4.3 System Features and Capabilities

In most cases where system feature variables enter into the regression equations, the interpretation of the effects has been unclear, and the measured relationship often appears to be confounded by other characteristics of the systems that support those specific features. It may be that a "post-controlled" approach like that necessarily used here, in which systems with and without particular features are compared in the aggregate, cannot address the issue, and it will be necessary to conduct detailed "micro-studies" of the actual use of these features, case by case, to illuminate their advantages and disadvantages.

9.4.4 What Issues are Most Important to User Satisfaction

The five regression analyses provide interesting but somwehat piecemeal evidence about problems in user satisfaction. To draw together the salient results from all five measures of satisfaction, we examined the "top five" variables appearing in each of the five regression analyses.

9.4.4.1 Difficulty in Subject Searching is the Most Important Single Factor in User Satisfaction

We found that:

1. Factor 4, "Subject searching is difficult," appeared in the top five in all five regressions, and was the most important single explanatory variable in four of the five equations. In all cases, improved subject searching (in the eyes of the users) leads to improved satisfaction.

2. Factor 7, "Library Services are not Helpful," appeared in the top five four times. Improvements in staff training, and particularly in the availability and quality of printed aids (given our earlier findings about the sources of assistance that users prefer) can be expected to improve user satisfaction with the catalog.

3. Factor 3, "Command and Control is Easy," appears in the top five three times. Improvements in command language and in capabilities for controlling the session and the displays would tend to increase satisfaction with the OLC.

4. Factor 5, "Known-Item Searching is Difficult," also appears in the top five three times. Enhancing capabilities to conduct known-item searches will enhance the success and satisfaction of the catalog's users.

5. Question 49, frequency of computer catalog use, appears in the top five twice. As noted previously, frequent OLC users are more satisfied users.

6. SELMODE, the ability to select search modes, also appears twice. The previous discussion of this finding emphasized that its significance is unclear, but its importance to user satisfaction would appear to warrant further investigation.

7. The following variables appeared in the "top five" once:

    a) Factor 1, "Codes and Abbreviations are Easy to Understand and Use": Improvements in this problem area improve user satisfaction.

    b) Factor 6, "The Computer Tries my Patience": Improvements in terminal availability and response time, and revision of verbose menus, instructions and messages will improve user satisfaction.

    c) Question 50, frequency of use of the card catalog: Frequent users of the card catalog are less satisfied with the computer catalog.

    d) AU_TI, the system capability to conduct combined author-title searches: This capability appears to enhance user satisfaction.

e) DISRUPT, the ability to interrupt the online display: Systems that have this capability appear less satisfactory to users. As discussed previously, this result may be an artifact, resulting indirectly from other, apparently unmeasured, system characteristics.

f) DISPF_B, the capability to move forward and backward in a long display: The presence of this feature also appears to degrade satisfaction. This result may also be an artifact.

9.4.4.2 Many Problem Areas and System Features Have No Significant Effect on User Satisfaction

Of equal interest is consideration of the variables that do *not* appear in the top five, or at any point in the regression analysis. Among these are:

- Factor 2, "Displays are Hard to Understand." This variable enters the regressions three times, although never in the top five. In two of the three cases, hard-to-understand displays paradoxically lead to better results. In any case, the quality of display formats, while a significant variable, apparently is not of paramount importance to users.

- Age and sex have been noted as important predisposing variables, but they are not of dominant value in user acceptance of the OLC.

- Numerous system features do not appear in the regressions at all, notably features like keyword searching, Boolean searching, and truncation. This may be due to the confounding effects discussed above, and the problems in analyzing system features recounted in Chapter 5. It may also be the case that system features work "indirectly" to influence the problems measured by the seven factor analysis variables. If so, the difficulties discussed in Chapter 5 regarding the relationship between system features and system problems continue to obtain, and different forms of analysis and different kinds of research designs will be required to address these issues.

- While frequency of catalog use is important, neither frequency of library use nor familiarity with computers in general seems to have a dominant influence on evaluation of the computer catalog.

Chapter 10

IMPLICATIONS OF THE SURVEY FINDINGS

In this chapter we would like to pull together some of the salient findings and assess their implications for action. The observations discussed below are all drawn from the data and analyses reported in previous chapters; the discussion that follows, however, is based on our interpretation of those findings.

The discussion is divided into three parts:

- Implications that are within the scope of action of *library managers* (directors, department heads, etc.).
- Implications that are within the scope of *system designers*.
- Implications that must be acted upon by the *library profession*.

10.1 IMPLICATIONS FOR LIBRARY MANAGERS

10.1.1 There are No Public Service Barriers to Adopting Online Catalogs

While financial and other considerations may prevent a library from installing an online catalog, there are no public service barriers: you will not be lynched by your users. The evidence shows that those who have used the OLC love it, and that those who have not like it almost as well. It is certainly true that some OLC designs will provide more satisfaction than others, but users (and non-users for the most part) prefer the OLC to the catalog forms it replaces, regardless of the level of sophistication or quality of the catalog.

10.1.2 Make the Catalog Visible

Don't be hesitant. Put the OLC terminals where users can't miss them. The evidence shows that this is the best form of publicity for the OLC, and (as we will discuss below), the catalog tends to "sell itself": those who see it use it, and those who use it tend to continue.

10.1.3 Plan for a Lot of Terminals

Over half of our respondents want more terminals: terminals throughout the library, and terminals in places other than the library. This tends to be true of both "opening day" OLCs and "mature" catalogs that have been available for years and already support hundreds of public access terminals. It would appear that the driving force here is not the inconvenience of waiting for an available terminal (about 28 percent of respondents said this was a problem--a large number, but smaller than the number who want more), but the convenience of having access to the catalog *where the users are*, rather than where the catalog card cabinet happens to be. This suggests that, although it is necessary to supply enough terminals initially to keep queuing to a satisfactory level, in the long run the demand for terminals may be nearly infinite. It would be sensible to prepare well in advance to deal with this demand.

10.1.4 Provide Lots of Writing Space at the Terminal

Over one-third of users complained about this problem. Providing space to take notes and stash belongings seems like an obvious design factor, but it is often overlooked.

10.1.5 Plan to Provide Printers

Taking notes from OLC searches is always a problem, even with enough writing space. About 30 percent of users want a printing capability in systems that do not now have it, and analysis shows this feature can help ameliorate a number of searching problems. As a corollary, make sure the printer is easy to use--this was a significant source of complaint among our respondents.

10.1.6 Plan to Expand the Database

User preferences for adding to the database vary widely, but most respondents want the database expanded in some way; only 11 percent could think of no additional material they wanted included. Expansion includes both retrospective conversion and the addition of formats not now in the catalog. Users' inability to remember what was included in the scope of the OLC was among the top three searching problems. Given the well-documented intolerance of library users to search multiple files, the only solution may be to include everything.

10.1.7 Assisting Users, Attracting Non-Users

10.1.7.1 A Review of the Findings

Before proceeding to our observations on how libraries can assist OLC users and attract non-users, we would like to briefly review the chief findings in this area:

1. The chief reason for non-use of OLCs appears to be that respondents are not frequent users of either the library or the library catalog (in any form).
2. The majority of users (70 percent) learn to use the OLC without staff help.
3. First-time users are generally enthusiastic about the OLC; satisfaction drops with increased use, then rises again as frequency of use increases.
4. Non-users think the online catalog is great: 90 percent have a favorable attitude toward the OLC, and (of those who could decide) 63 percent think the OLC is better than the catalog it replaces.

10.1.7.2 Promote Use of the Library--The OLC Will Promote Itself

If, as the evidence shows, most users discover the OLC by seeing it in the library, most learn to use it with the help of printed and online aids, and most non-users of the OLC are non-users of libraries and library catalogs, it would appear that the best expenditure of staff effort to increase OLC use is to make frequent library users of infrequent ones. For fairly frequent library users, the OLC sells itself, and groups who do not now use it would not, for the most part, take advantage of training or promotional programs targeted on the catalog itself.

10.1.7.3 Provide More and Better Printed Aids

Most users learn to use the catalog from print sources, and most turn to printed guides and brochures when they need help. This is not to say that public service staff are unneeded or should themselves be untrained, but it does imply that effective printed materials should be a priority.

10.1.7.4 *Plan for Online Assistance*

One factor that ameliorates reliance on both printed aids and staff assistance is online help, but it is evident that halfway measures will not do: a few instructions or help screens, especially if they are "mandatory," may try the users' patience, and the evidence shows that a little online help may add to the load on public service staff, while a lot of help substantially reduces it.

10.1.7.5 *To Improve Satisfaction, Improve the System, Not the Training*

First-time users of the OLC generally walk away happy, with or without prior training. Levels of satisfaction drop with further experience, as though initial expectations had been let down. We also know that "success breeds success"--users who find what they are looking for are not only happier with the search, but with with the OLC in general. It looks as if the best way to improve user satisfaction is *not* to train users how to deal with problems (or get around them), but to remedy the system's inadequacies.

Follow the previous advice: add records, terminals, and printers; give printed and online assistance. Press system designers to improve and simplify the interface, and to add useful features. The public service staff see the users and help them with problems: involve the staff in setting priorities and developing specifications.

10.2 *IMPLICATIONS FOR SYSTEM DESIGNERS*

10.2.1 *When Designing New Features and Capabilities, Pay Attention to the Interface*

Features and aids can help users, but can also make the user interface too complex and wordy. When adding new software features or online help systems, pay special attention to the way they manifest themselves in the interface, and make sure that the methods for accessing and controlling them are clear, concise, simple, and consistent with the existing interface.

10.2.2 Subject Searching is Important--Do What You Can to Help

Apparently there is no single aspect of the user's interaction with the OLC that influences his satisfaction more than searching by subject. The users' stated preferences, their reported experience in "finding the correct subject terms," and our analysis of user satisfaction all point to two actions with the potential to improve subject searching:

1. Implement keyword searching for subjects (and for titles, although the users' interest in the latter is less marked).

2. Help them find the term(s) they want by permitting them to browse the subject index or thesaurus.

10.2.3 Clean Up the User Interface

Users experience difficulties in remembering commands and controlling sessions, and to a lesser degree in using understanding codes and abbreviations. This is a major problem area, but fortunately it can be addressed fairly easily by rationalizing command syntax, simplifying commands, speeding up menu displays, and the like.

10.2.4 Provide Circulation Status Information

The third-ranked request for system improvement is "ability to know if the book is available for my use." Providing circulation status information should be a high priority for systems without this facility.

10.2.5 Provide Brief Displays

The data show that a very small proportion of users (about 5 percent) use the OLC to obtain and record the more technical details of bibliographic information. Most users are apparently satisfied with less-than-full bibliographic displays, and the time it takes the OLC to display information they do not need may test their patience. Plan for relatively brief displays[22] as a default, and offer more complete information as an option.

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[22] Just how brief has been the subject of considerable research. The topic is, however, outside the scope of this report.

10.2.6 Make It Easier to Construct Multi-Index Searches

Between 22 and 40 percent of all searches appear to require access to more than one index. If searches cannot be constructed across indices with Boolean arguments, the user's task becomes very difficult. When this capability is present, it may not be well understood; clear explanation and examples are essential.

10.2.7 Do Not Give High Priority to Very Short Response Times

Response time is an important consideration in system design and operation, but it is the seventh-ranked problem area identified by users. Delays do not seem to play a predominant role in user satisfaction. Extended response times are probably unacceptable, but very short response times may not be necessary, especially if the resources needed to achieve them can be better used on other system improvements.

10.3 IMPLICATIONS FOR THE LIBRARY PROFESSION

Much of the data reported here reinforces the belief, propounded by Cochrane[23] and others, that subject searching is an important aspect of online catalog use, and that subject access must be improved. System designers can do a good deal to help, but they can only work with the bibliographic data they have. It is up to the profession as a whole to improve standards for record creation that in turn help to improve subject-searching success.

There are two distinct areas for possible improvement.

10.3.1 Enrich Subject Access

The first is to increase the amount of subject information in bibliographic records. Among the four highest user priorities for improvements of *any* type (systems, library services, databases) is "the ability to search a book's table of contents, summary, or index."

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[23] Pauline Atherton Cochrane, "Subject Access in the Online Catalog," *Research Libraries in OCLC* No. 5, January 1982, pages 1-7

10.3.2 *Simplify Subject Access*

"Finding the correct subject term" is among the three most serious problems users experience with OLC systems. The problem can be reduced by restricting the number of possible terms under which a user must search, either by rigorously controlling the vocabulary or by automatically linking the user's search terms with synonymous and related terms that appear in subject headings. The nature of this problem and proposals for its solution are being debated at length in the professional community at this moment, and we have nothing to add to that debate except this: whatever can be done to simplify subject access will be greatly appreciated by users of online catalogs.

Appendix A

THE USER QUESTIONNAIRE

Council on Library Resources

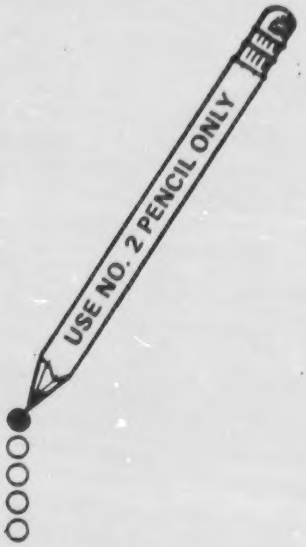
COMPUTER CATALOG STUDY

User Questionnaire

The library is conducting a study of its computer catalog to improve it. This questionnaire is a way to communicate your views. It should take you only about 15 minutes to complete. Your responses are confidential. Please do not write your name anywhere on the questionnaire. Thank you.

MARKING INSTRUCTIONS

- USE A NO. 2 PENCIL ONLY.
- FILL THE CIRCLES COMPLETELY.
- BE SURE TO ERASE CLEANLY ANY MARKS YOU WISH TO CHANGE.
- MAKE NO STRAY MARKS ON THIS QUESTIONNAIRE.



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DO NOT WRITE IN THIS AREA

PART 1: ABOUT YOUR MOST RECENT SEARCH

INSTRUCTIONS: Please answer these questions about the computer catalog search you just completed.

1. I came to this computer search with:
(Mark ALL that apply)

a. A complete author's name ○
b. Part of an author's name ○
c. A complete title ○
d. Part of a title ○
e. A topic word or words ○
f. A subject heading or headings ○
g. A complete call number ○
h. Part of a call number ○

2. By searching this computer catalog I was trying to find:
(Mark ALL that apply)

a. A specific book, journal or magazine ○
b. Books, journals or magazines on a topic or subject ○
c. Books by a specific author ○
d. Information such as publisher, date, spelling of a name, etc. ○
e. If a book that I know the library has is available for my use ○
f. Another library that has a book, journal or magazine that I want ○

3. I searched for what I wanted by:
(Mark ALL that apply)

a. A complete author's name ○
b. Part of an author's name ○
c. A complete title ○
d. Part of a title ○
e. A topic word or words ○
f. A subject heading or headings ○
g. A complete call number ○
h. Part of a call number ○

4. I need this information for:
(Mark ALL that apply)

a. Recreational uses ○
b. Making or fixing something ○
c. My work or job ○
d. Personal interest ○
e. A hobby ○
f. Class or course reading ○
g. A course paper or report ○
h. A thesis or dissertation ○
i. Writing for publication ○
j. Teaching or planning a course ○
k. Keeping up on a topic or subject ○

5. In this computer search I found:
(Mark ONE only)

a. More than I was looking for ○
b. All that I was looking for ○
c. Some of what I was looking for ○
d. Nothing I was looking for ○

6. In relation to what I was looking for, this computer search was:
(Mark ONE only)

a. Very satisfactory ○
b. Somewhat satisfactory ○
c. Somewhat unsatisfactory ○
d. Very unsatisfactory ○

7. I came across things of interest other than what I was looking for:

a. YES ○
b. NO ○

8. I got help in doing this computer catalog search from:
(Mark ALL that apply)

a. Printed material or signs ○
b. Instructions on the terminal screen ○
c. Library staff member ○
d. Person nearby ○
e. I did not get help ○

9. My overall or general attitude toward the computer catalog is:
(Mark ONE only)

- a. Very favorable ○
- b. Somewhat favorable ○
- c. Somewhat unfavorable ○
- d. Very unfavorable ○

10. Compared to the card, book, or microfiche catalog in this library, the computer catalog is:
(Mark ONE only)

- a. Better ○
- b. About the same ○
- c. Worse ○
- d. Can't decide ○

PART 2: YOUR EXPERIENCE WITH COMPUTER CATALOG FEATURES

INSTRUCTIONS: Mark the single column for each question that corresponds most closely to how you feel. If the statement does not apply to your experience at the computer catalog, mark the column, "Does Not Apply".

	STRONGLY AGREE	AGREE	NEITHER AGREE NOR DISAGREE	DISAGREE	STRONGLY DISAGREE	DOES NOT APPLY
11. A computer search by title is difficult	○	○	○	○	○	○
12. A computer search by author is easy	○	○	○	○	○	○
13. A computer search by subject is difficult	○	○	○	○	○	○
14. A computer search by call number is easy	○	○	○	○	○	○
15. A computer search by combined author/title is difficult	○	○	○	○	○	○
16. Remembering commands in the middle of the search is easy	○	○	○	○	○	○
17. Finding the correct subject term is difficult	○	○	○	○	○	○
18. Scanning through a long display (forward or backward) is easy	○	○	○	○	○	○
19. Increasing the result when too little is retrieved is difficult	○	○	○	○	○	○
20. Reducing the result when too much is retrieved is easy	○	○	○	○	○	○
21. Understanding explanations on the screen is difficult	○	○	○	○	○	○
22. Using codes or abbreviations for searching is easy	○	○	○	○	○	○
23. Abbreviations on the screen are easy to understand	○	○	○	○	○	○
24. Locating call numbers on the screen is difficult	○	○	○	○	○	○
25. Searching with a short form of a name or a word (truncation) is easy	○	○	○	○	○	○

	STRONGLY AGREE	AGREE	NEITHER AGREE NOR DISAGREE	DISAGREE	STRONGLY DISAGREE	DOES NOT APPLY
26. Using logical terms like AND, OR, NOT is difficult	○	○	○	○	○	○
27. Remembering the exact sequence or order of commands is easy	○	○	○	○	○	○
28. Understanding the initial instructions on the screen is difficult	○	○	○	○	○	○
29. Understanding the display for a single book, journal or magazine is easy	○	○	○	○	○	○
30. Understanding the display that shows more than a single book, journal or magazine is difficult	○	○	○	○	○	○
31. Interrupting or stopping the display of information is easy	○	○	○	○	○	○
32. Typing in exact spelling, initials, spaces and hyphens is difficult to do	○	○	○	○	○	○
33. Knowing what is included in the computer catalog is easy to remember	○	○	○	○	○	○
34. The order in which items are displayed is easy to understand	○	○	○	○	○	○
35. Displayed messages are too long	○	○	○	○	○	○

	STRONGLY AGREE	AGREE	NEITHER AGREE NOR DISAGREE	DISAGREE	STRONGLY DISAGREE	DOES NOT APPLY
36. Selecting from a list of choices takes too much time	○	○	○	○	○	○
37. Entering commands when I want to during the search process is difficult	○	○	○	○	○	○
38. The rate at which the computer responds is too slow	○	○	○	○	○	○
39. The availability of signs and brochures is adequate	○	○	○	○	○	○
40. Signs and brochures are not very useful	○	○	○	○	○	○
41. The staff advice is often not helpful	○	○	○	○	○	○
42. It is hard to find a free terminal	○	○	○	○	○	○

YOU ARE MORE THAN HALF - WAY DONE

PART 3: IMPROVING THE COMPUTER CATALOG

INSTRUCTIONS: Select the response or responses that best reflect your views about changes that should be made in the computer catalog.

43. When I use the computer catalog terminal: (Mark YES or NO)

	YES	NO
a. The keyboard is confusing to use	○	○
b. There is too much glare on the screen	○	○
c. The letters and numbers are easy to read	○	○
d. The lighting around the terminal is too bright	○	○
e. There is enough writing space at the terminal	○	○
f. Nearby noise is distracting	○	○
g. The terminal table is too high or too low	○	○
h. The printer is easy to use	○	○

44. Select up to FOUR additional features you would like this computer catalog to have:

a. Providing step by step instructions ○
b. Searching by any word or words in a title ○
c. Searching by any word or words in a subject heading ○
d. Limiting search results by date of publication ○
e. Limiting search results by language ○
f. Ability to search by journal title abbreviations ○
g. Ability to change the order in which items are displayed ○
h. Ability to view a list of words related to my search words ○
i. Ability to search for illustrations and bibliographies ○
j. Ability to search by call number ○
k. Ability to print search results ○
l. Ability to search a book's table of contents, summary or index ○
m. Ability to know if a book is checked out ○
n. Ability to tell where a book is located in the library ○
o. None ○

45. Select up to FOUR computer catalog service improvements you would like the library to make:

a. More terminals ○
b. Terminals at locations other than near the card catalog ○
c. Terminals at places other than library buildings ○
d. A chart of commands posted at the terminal ○
e. A manual or brochure at the terminal ○
f. An instruction manual for purchase ○
g. Training sessions ○
h. Slide/tape/cassette training program ○
i. None ○

46. Select up to FOUR kinds of material you would like to see added to the computer catalog:

a. Dissertations ○
b. Motion picture films ○
c. Government publications ○
d. Journal or magazine titles ○
e. Maps ○
f. Manuscripts ○
g. Music scores ○
h. Newspapers ○
i. Phonograph records or tapes ○
j. Technical reports ○
k. More of the library's older books ○
l. None ○
m. Other ○

47. BRIEFLY DESCRIBE ANY OTHER PROBLEMS WITH THIS COMPUTER CATALOG OR CHANGES YOU WOULD LIKE MADE TO IT: ○

PART 4: ABOUT YOURSELF

INSTRUCTIONS: Your responses are confidential. Please do not write your name anywhere on this questionnaire.

48. I come to this library:

a. Daily ○
b. Weekly ○
c. Monthly ○
d. About four times a year ○
e. About once a year ○
f. Not before today ○

49. I use this computer catalog:

a. Every library visit ○
b. Almost every visit ○
c. Occasionally ○
d. Rarely ○
e. Not before today ○

50. I use this library's book, card or microfilm catalog:

a. Every visit ○
b. Almost every visit ○
c. Occasionally ○
d. Rarely ○
e. Never ○

51. I use a computer system other than the library's computer catalog:

a. Daily ○
b. Weekly ○
c. Monthly ○
d. About four times a year ○
e. About once a year ○
f. Never ○

52. I first heard about this computer catalog from: (Mark ONE only)

a. Noticing a terminal in the library ○
b. Library tour, orientation or demonstration ○
c. An article or written announcement ○
d. A course instructor ○
e. A friend or family member ○
f. Library staff ○

53. I learned how to use this computer catalog: (Mark ALL that apply)

a. From a friend or someone at a nearby terminal ○
b. Using printed instructions ○
c. Using instructions on the terminal screen ○
d. From the library staff ○
e. From a library course or orientation ○
f. From a slide/tape/cassette program ○
g. By myself without any help ○

54. My age group is:

a. 14 and under ○
b. 15 - 19 years ○
c. 20 - 24 years ○
d. 25 - 34 years ○
e. 35 - 44 years ○
f. 45 - 54 years ○
g. 55 - 64 years ○
h. 65 and over ○

55. I am:

a. Female ○
b. Male ○

56. Mark your current or highest educational level: (Mark ONE only)

a. Grade School or Elementary School ○
b. High School or Secondary School ○
c. Some College or University ○
d. College or University Graduate ○

If you are not completing this questionnaire at a college or university, please stop here. Thank you.

If you are completing this questionnaire at a college or university, please continue.

57. The category that best describes my academic area is: (Mark ONE only)

a. Arts and Humanities ○
b. Physical/Biological Sciences ○
c. Social Sciences ○
d. Business/Management ○
e. Education ○
f. Engineering ○
g. Medical/Health Sciences ○
h. Law ○
i. Major not declared ○
j. Interdisciplinary ○

58. The main focus of my academic work at the present time is:
(Mark ALL that apply)

a. Course Work ○
b. Teaching ○
c. Research ○

59. My present affiliation with this college or university is:

a. Freshman/Sophomore ○
b. Junior/Senior ○
c. Graduate - masters level ○
d. Graduate - doctoral level ○
e. Graduate - professional school ○
f. Faculty ○
g. Staff ○
h. Other ○

Thank you for participating in this study of the computer catalog. This completes the questionnaire. Please return it.

SUPPLEMENTARY QUESTIONNAIRE ITEMS

60. ○○○○○○○○○○○○○○○
61. ○○○○○○○○○○○○○○○
62. ○○○○○○○○○○○○○○○
63. ○○○○○○○○○○○○○○○
64. ○○○○○○○○○○○○○○○

OFFICE USE ONLY

TERM I.D. ☐☐
- ○ Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ Ⓕ Ⓖ Ⓗ Ⓘ Ⓙ Ⓚ Ⓛ Ⓜ Ⓝ Ⓞ Ⓟ Ⓠ Ⓡ Ⓢ Ⓣ Ⓤ Ⓥ Ⓦ Ⓧ Ⓨ Ⓩ ⓪ ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ (each of 2 columns)

DATE
- **MO.** ☐☐ — column 1: ⓪ ①; column 2: ⓪ ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨
- **DAY** ☐☐ — column 1: ⓪ ① ② ③; column 2: ⓪ ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨
- **YR.** ☐☐ — column 1: ⑧ ⑨; column 2: ⓪ ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨

TIME
- **HR** ☐☐ — ⓪ ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ (each of 2 columns)
- **MIN.** ☐☐ — ⓪ ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ (each of 2 columns)

DATA COLL. ☐☐
- ○ Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ Ⓕ Ⓖ Ⓗ Ⓘ Ⓙ Ⓚ Ⓛ Ⓜ Ⓝ Ⓞ Ⓟ Ⓠ Ⓡ Ⓢ Ⓣ Ⓤ Ⓥ Ⓦ Ⓧ Ⓨ Ⓩ (each of 2 columns)

TERM LOC. ☐☐
- ○ Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ Ⓕ Ⓖ Ⓗ Ⓘ Ⓙ Ⓚ Ⓛ Ⓜ Ⓝ Ⓞ Ⓟ Ⓠ Ⓡ Ⓢ Ⓣ Ⓤ Ⓥ Ⓦ Ⓧ Ⓨ Ⓩ (each of 2 columns)

LIBRARY SYSTEM ☐☐☐
- ○ Ⓐ Ⓑ Ⓒ Ⓓ Ⓔ Ⓕ Ⓖ Ⓗ Ⓘ Ⓙ Ⓚ Ⓛ Ⓜ Ⓝ Ⓞ Ⓟ Ⓠ Ⓡ Ⓢ Ⓣ Ⓤ Ⓥ Ⓦ Ⓧ Ⓨ Ⓩ (each of 3 columns)

VERIFIED: ☐

BY: ______________________

DATE: ______________________

■■■■■■■○■○■■■○■○○○○○○○○○○○○ 23935

DO NOT WRITE IN THIS AREA

Appendix B

THE NON-USER QUESTIONNAIRE

Council on Library Resources

COMPUTER CATALOG STUDY

Questionnaire

The library has a computer catalog and not everyone has had a chance to use it yet. If you have NEVER USED THE COMPUTER CATALOG you can contribute to the quality of library services by completing this questionnaire. It takes about five minutes. Your responses are confidential. Please do not write your name anywhere on the questionnaire. Thank you.

MARKING INSTRUCTIONS

- USE A NO. 2 PENCIL ONLY.
- FILL THE CIRCLES COMPLETELY.
- BE SURE TO ERASE CLEANLY ANY MARKS YOU WISH TO CHANGE.
- MAKE NO STRAY MARKS ON THIS QUESTIONNAIRE.

USE NO. 2 PENCIL ONLY

DO NOT WRITE IN THIS AREA

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NCS Trans-Optic 05-15300 321

PART 1: WHAT YOU THINK ABOUT THE COMPUTER CATALOG

INSTRUCTIONS: Please mark the response that best describes how you view a computer catalog.

1. I have not used the computer catalog up to now because:
(Mark ALL that apply)

a. I do not like to use computers ○
b. I did not know there was a computer catalog ○

c. I do not know where it is ○
d. I have not had time to learn to use it ○

e. I have not taken training sessions on how to use it ○
f. There has not been any staff at the terminals to assist me in using it ○
g. The terminals were all in use when I wanted to use it ○
h. I have not needed to use any library catalog recently ○
i. The card catalog is easier to use ○
j. The card catalog contains more of the information I need ○
k. I am a visitor or infrequent user of this library ○

2. How much time do you think it takes to learn to use the computer catalog?

a. A day or more ○
b. Between 1/2 of a day and a day ○
c. Between an hour and 1/2 of a day ○
d. Between 30 minutes and an hour ○
e. Between 15 minutes and 30 minutes ○
f. 15 minutes or less ○

3. How difficult or easy do you think it would be to learn to use the computer catalog?

a. Very difficult ○
b. Somewhat difficult ○
c. Somewhat easy ○
d. Very easy ○

4. My overall or general attitude toward the computer catalog is:

a. Very favorable ○
b. Somewhat favorable ○
c. Somewhat unfavorable ○
d. Very unfavorable ○

5. How likely are you to use the computer catalog in the future?

a. Very likely ○
b. Somewhat likely ○
c. Somewhat unlikely ○
d. Very unlikely ○

6. Compared to the card, book, or microfiche catalog in this library the computer catalog is:
(Mark ONE only)

a. Better ○
b. About the same ○
c. Worse ○
d. Can't decide ○

PART 2: ABOUT YOURSELF

INSTRUCTIONS: Your responses are confidential. Please do not write your name anywhere on this questionnaire.

7. I come to this library:

a. Daily ○
b. Weekly ○
c. Monthly ○
d. About four times a year ○
e. About once a year ○
f. Not before today ○

8. I use this library's book, card or microfilm catalog:

a. Every visit ○
b. Almost every visit ○
c. Occasionally ○
d. Rarely ○
e. Not before today ○

9. I use a computer system other than the library's computer catalog:

a. Daily ○
b. Weekly ○
c. Monthly ○
d. About four times a year ○
e. About once a year ○
f. Never ○

10. My age group is:

a. 14 and under ○
b. 15 - 19 years ○
c. 20 - 24 years ○
d. 25 - 34 years ○
e. 35 - 44 years ○
f. 45 - 54 years ○
g. 55 - 64 years ○
h. 65 and over ○

11. I am:

a. Female ○
b. Male ○

12. Mark your current or highest educational level: (Mark ONE only)

a. Grade School or Elementary School ○
b. High School or Secondary School ○
c. Some College or University ○
d. College or University Graduate ○

If you are not completing this questionnaire at a college or university, please stop here. Thank you.

If you are completing this questionnaire at a college or university, please continue.

13. The category that best describes my academic area is: (Mark ONE only)

a. Arts and Humanities ○
b. Physical/Biological Sciences ○
c. Social Sciences ○
d. Business/Management ○
e. Education ○
f. Engineering ○
g. Medical/Health Sciences ○
h. Law ○
i. Major not declared ○
j. Interdisciplinary ○

14. The main focus of my academic work at the present time is: (Mark ALL that apply)

a. Course Work ○
b. Teaching ○
c. Research ○

15. My present affiliation with this college or university is:

a. Freshman/Sophomore ○
b. Junior/Senior ○
c. Graduate - masters level ○
d. Graduate - doctoral level ○
e. Graduate - professional school ○
f. Faculty ○
g. Staff ○
h. Other ○

Thank you for participating in this study of the computer catalog. This completes the questionnaire. Please return it.

SUPPLEMENTARY QUESTIONNAIRE ITEMS

16. ○○○○○○○○○○○○○○○
17. ○○○○○○○○○○○○○○○
18. ○○○○○○○○○○○○○○○
19. ○○○○○○○○○○○○○○○

LIBRARY SYSTEM			LOCATION		DATA COLL.	
○	○	○	○	○	○	○
A	A	A	A	A	A	A
B	B	B	B	B	B	B
C	C	C	C	C	C	C
D	D	D	D	D	D	D
E	E	E	E	E	E	E
F	F	F	F	F	F	F
G	G	G	G	G	G	G
H	H	H	H	H	H	H
I	I	I	I	I	I	I
J	J	J	J	J	J	J
K	K	K	K	K	K	K
L	L	L	L	L	L	L
M	M	M	M	M	M	M
N	N	N	N	N	N	N
O	O	O	O	O	O	O
P	P	P	P	P	P	P
Q	Q	Q	Q	Q	Q	Q
R	R	R	R	R	R	R
S	S	S	S	S	S	S
T	T	T	T	T	T	T
U	U	U	U	U	U	U
V	V	V	V	V	V	V
W	W	W	W	W	W	W
X	X	X	X	X	X	X
Y	Y	Y	Y	Y	Y	Y
Z	Z	Z	Z	Z	Z	Z

DATE					
MO.		DAY		YR.	
0	0	0	0		0
1	1	1	1		1
	2	2	2		2
	3	3	3		3
	4		4		4
	5		5		5
	6		6		6
	7		7		7
	8		8	8	8
	9		9	9	9

TIME			
HR		MIN.	
0	0	0	0
1	1	1	1
2	2	2	2
3	3	3	3
4	4	4	4
5	5	5	5
6	6	6	6
7	7	7	7
8	8	8	8
9	9	9	9

VERIFIED: ☐

BY: ______________________

DATE: ______________________

DO NOT WRITE IN THIS AREA

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Appendix C

FREQUENCY TABLES FOR THE USER QUESTIONNAIRE

This appendix includes computer listings of questionnaire data from the Statistical Package for the Social Sciences (SPSS). Page numbering in this appendix is that of the original computer listings, and does not correspond to the numbering for the report as a whole. Page references in the text are to the internal numbers in this appendix.

```
CLR USER QUESTIONNAIRE: AGGREGATE FREQUENCIES                                         08/04/82        PAGE   17
RECODED VARIABLES
FILE   FINAL    (CREATION DATE = 08/03/82)

GROUP RQUEST1    I CAME TO THE SEARCH WITH:
     (VALUE TABULATED =      1)

                                                             PCT OF   PCT OF
DICHOTOMY LABEL                           NAME      COUNT  RESPONSES  CASES

COMPLETE AUTHOR                           RQ1A       3305      22.8     41.9

PART AUTHOR'S NAME                        RQ1B        998       6.9     12.7

COMPLETE TITLE                            RQ1C       3098      21.4     39.3

PART TITLE                                RQ1D        858       5.9     10.9

TOPIC WORD OR WORDS                       RQ1E       2265      15.6     28.7

SUBJECT HEADING                           RQ1F       3503      24.2     44.4

COMPLETE CALL NUMBER                      RQ1G        392       2.7      5.0

PART CALL NUMBER                          RQ1H         84       0.6      1.1
                                                  -------     -----    -----
                                 TOTAL RESPONSES    14503     100.0    184.0

    210 MISSING CASES        7884 VALID CASES
```

```
CLR USER QUESTIONNAIRE: AGGREGATE FREQUENCIES                                    08/04/82        PAGE   18
RECODED VARIABLES
FILE   FINAL    (CREATION DATE = 08/03/82)

GROUP RQUEST2   IN THIS SEARCH I WAS TRYING TO FIND:
     (VALUE TABULATED =      1)

                                                                 PCT OF   PCT OF
DICHOTOMY LABEL                           NAME        COUNT   RESPONSES   CASES

SPECIFIC BOOK ETC                         RQ2A         3919       32.0     50.1

BOOKS ON TOPIC                            RQ2B         4176       34.1     53.4

BOOKS BY SPEC AUTHOR                      RQ2C         1844       15.1     23.6

PUB-DATE-SPELLING                         RQ2D          411        3.4      5.3

IF BOOK IS AVAILABLE                      RQ2E         1308       10.7     16.7

OTHER LIBRARY W BOOK                      RQ2F          576        4.7      7.4
                                                    -------      -----    -----
                                   TOTAL RESPONSES    12234      100.0    156.5

    278 MISSING CASES        7816 VALID CASES
```

```
CLR USER QUESTIONNAIRE: AGGREGATE FREQUENCIES                                        08/04/82        PAGE   19
RECODED VARIABLES
FILE   FINAL    (CREATION DATE = 08/03/82)

GROUP RQUEST3   I SEARCHED FOR WHAT I WANTED BY:
     (VALUE TABULATED =      1)
                                                                 PCT OF   PCT OF
DICHOTOMY LABEL                            NAME        COUNT   RESPONSES  CASES

COMPLETE AUTHOR                            RQ3A         2958      21.0     38.0

PART AUTHOR'S NAME                         RQ3B         1168       8.3     15.0

COMPLETE TITLE                             RQ3C         2762      19.6     35.5

PART TITLE                                 RQ3D         1106       7.8     14.2

TOPIC WORD OR WORDS                        RQ3E         2326      16.5     29.9

SUBJECT HEADINGS                           RQ3F         3375      23.9     43.4

COMPLETE CALL NUMBER                       RQ3G          344       2.4      4.4

PART CALL NUMBER                           RQ3H           61       0.4      0.8
                                                     -------     -----    -----
                                   TOTAL RESPONSES     14100     100.0    181.1

    309 MISSING CASES        7785 VALID CASES
```

```
CLR USER QUESTIONNAIRE: AGGREGATE FREQUENCIES                                        08/04/82        PAGE   20
RECODED VARIABLES
FILE   FINAL    (CREATION DATE = 08/03/82)

GROUP RQUEST4   I NEED THIS INFORMATION FOR:
     (VALUE TABULATED =      1)

                                                                 PCT OF  PCT OF
DICHOTOMY LABEL                          NAME         COUNT  RESPONSES  CASES

RECREATIONAL USES                        RQ4A          1307       9.4     16.8

MAKE-FIX SOMETHING                       RQ4B           246       1.8      3.2

WORK OR JOB                              RQ4C          1321       9.5     16.9

PERSONAL INTEREST                        RQ4D          2334      16.9     29.9

HOBBY                                    RQ4E           602       4.3      7.7

CLASS-COURSE READING                     RQ4F          2238      16.2     28.7

COURSE PAPER-REPORT                      RQ4G          3012      21.8     38.6

THESIS-DISSERTATION                      RQ4H           755       5.5      9.7

PUBLICATION                              RQ4I           560       4.0      7.2

TEACHING A COURSE                        RQ4J           358       2.6      4.6

KEEP UP ON TOPIC                         RQ4K          1107       8.0     14.2
                                                      -------    -----    -----
                                 TOTAL RESPONSES      13840     100.0    177.5

    295 MISSING CASES        7799 VALID CASES
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RQ5       IN THIS SEARCH I FOUND

                                                 RELATIVE  ADJUSTED    CUM
                                      ABSOLUTE     FREQ      FREQ      FREQ
CATEGORY LABEL                 CODE     FREQ      (PCT)     (PCT)     (PCT)

MORE   THAN                      1.     1280      15.8      16.6      16.6

ALL OR  MOST                     2.     2122      26.2      27.5      44.2

SOME                             3.     3050      37.7      39.6      83.7

NOTHING                          4.     1252      15.5      16.3     100.0

                                 0.      390       4.8    MISSING    100.0
                                       ------    ------    ------
                              TOTAL     8094     100.0     100.0

MEAN           2.555     STD ERR        0.011      MEDIAN        2.648
MODE           3.000     STD DEV        0.951      VARIANCE      0.904
KURTOSIS      -0.895     SKEWNESS      -0.170      RANGE         3.000
MINIMUM        1.000     MAXIMUM        4.000

VALID CASES     7704     MISSING CASES    390
```

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CLR USER QUESTIONNAIRE: AGGREGATE FREQUENCIES                                     08/04/82        PAGE   23
RECODED VARIABLES
FILE   FINAL    (CREATION DATE = 08/03/82)

RQ6       IN REL TO WHAT I WAS LOOKING FOR SEARCH

                                                   RELATIVE  ADJUSTED    CUM
                                        ABSOLUTE     FREQ      FREQ      FREQ
CATEGORY LABEL                   CODE     FREQ      (PCT)     (PCT)     (PCT)

VERY SATISFACTORY                  1.     3587      44.3      46.5      46.5

SOMEWHAT SATISFACTOR               2.     2590      32.0      33.6      80.0

SOMEWHAT UNSATISFACT               3.      805       9.9      10.4      90.5

VERY UNSATISFACTORY                4.      736       9.1       9.5     100.0

                                   0.      376       4.6   MISSING     100.0
                                        ------    ------    ------
                                TOTAL     8094     100.0     100.0

MEAN          1.830      STD ERR        0.011       MEDIAN        1.605
MODE          1.000      STD DEV        0.960       VARIANCE      0.922
KURTOSIS     -0.021      SKEWNESS       0.991       RANGE         3.000
MINIMUM       1.000      MAXIMUM        4.000

VALID CASES    7718      MISSING CASES    376
```

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CLR USER QUESTIONNAIRE: AGGREGATE FREQUENCIES                                      08/04/82       PAGE   24
RECODED VARIABLES
FILE   FINAL    (CREATION DATE = 08/03/82)

RQ7       CAME ACROSS OTHER THINGS OF INTEREST

                                                  RELATIVE  ADJUSTED    CUM
                                        ABSOLUTE    FREQ      FREQ      FREQ
CATEGORY LABEL                   CODE     FREQ     (PCT)     (PCT)     (PCT)

YES                                1.     3835      47.4      49.8      49.8

NO                                 2.     3867      47.8      50.2     100.0

                                   0.      392       4.8    MISSING    100.0
                                         ------    ------    ------
                                 TOTAL    8094     100.0     100.0


MEAN            1.502      STD ERR         0.006      MEDIAN          1.504
MODE            2.000      STD DEV         0.500      VARIANCE        0.250
KURTOSIS       -2.000      SKEWNESS       -0.008      RANGE           1.000
MINIMUM         1.000      MAXIMUM         2.000

VALID CASES      7702      MISSING CASES    392
```

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GROUP RQUEST8   I GOT HELP FROM:
     (VALUE TABULATED =      1)

                                                        PCT OF  PCT OF
DICHOTOMY LABEL                       NAME      COUNT  RESPONSES  CASES

PRINTED MATTER-SIGNS                  RQ8A       3133     30.9     40.6

TERMINAL SCREEN INST                  RQ8B       2464     24.3     32.0

LIBRARY STAFF MEMBER                  RQ8C       1710     16.9     22.2

PERSON NEARBY                         RQ8D        434      4.3      5.6

I DID NOT GET HELP                    RQ8E       2394     23.6     31.0
                                               -------    -----    -----
                              TOTAL RESPONSES    10135    100.0    131.4

   383 MISSING CASES         7711 VALID CASES
```

```
CLR USER QUESTIONNAIRE: AGGREGATE FREQUENCIES                                        08/04/82        PAGE   28
RECODED VARIABLES
FILE    FINAL    (CREATION DATE = 08/03/82)

RQ9       GENERAL ATTITUDE TOWARD COMPUTER CAT IS

                                                 RELATIVE  ADJUSTED    CUM
                                       ABSOLUTE    FREQ      FREQ      FREQ
CATEGORY LABEL                 CODE      FREQ      (PCT)     (PCT)     (PCT)

VERY FAVORABLE                   1.      5174      63.9      67.0      67.0

SOMEWHAT FAVORABLE               2.      1962      24.2      25.4      92.4

SOMEWHAT UNFAVORABLE             3.       406       5.0       5.3      97.7

VERY    UNFAVORABLE              4.       177       2.2       2.3     100.0

                                 0.       375       4.6    MISSING    100.0
                                       -------   -------   -------
                              TOTAL      8094     100.0     100.0

MEAN          1.428     STD ERR        0.008      MEDIAN         1.246
MODE          1.000     STD DEV        0.698      VARIANCE       0.488
KURTOSIS      2.781     SKEWNESS       1.731      RANGE          3.000
MINIMUM       1.000     MAXIMUM        4.000

VALID CASES    7719     MISSING CASES    375
```

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CLR USER QUESTIONNAIRE: AGGREGATE FREQUENCIES                                         08/04/82        PAGE  29
RECODED VARIABLES
FILE   FINAL    (CREATION DATE = 08/03/82)

RQ10      COMPUTER CAT COMPARED TO OTHER CAT

                                                      RELATIVE  ADJUSTED     CUM
                                           ABSOLUTE     FREQ      FREQ       FREQ
CATEGORY LABEL                     CODE      FREQ      (PCT)     (PCT)      (PCT)

BETTER                               1.      5305       65.5      74.5      74.5

EQUAL                                2.      1177       14.5      16.5      91.0

WORSE                                3.       638        7.9       9.0     100.0

                                     0.       415        5.1   MISSING     100.0

CAN'T   DECIDE                       4.       559        6.9   MISSING     100.0
                                           ------     ------    ------
                                  TOTAL      8094      100.0     100.0

MEAN              1.345      STD ERR          0.008        MEDIAN          1.171
MODE              1.000      STD DEV          0.636        VARIANCE        0.405
KURTOSIS          1.354      SKEWNESS         1.640        RANGE           2.000
MINIMUM           1.000      MAXIMUM          3.000

VALID CASES    7120          MISSING CASES    974
```

NEGATIVELY PHRASED LIKERT RQUESTIONS
(I.E., XXX IS DIFFICULT)
(MISSING VALS INCLUDED)

	RQ11 SRCH BY TITLE	RQ13 SRCH BY SUBJ.	RQ15 SRCH BY AUTH/ TITLE	RQ17 FIND SUBJ. TERM	RQ19 INCR. RE- SULTS	RQ21 UNDER STAND ING EXPLN	RQ24 LOCAT CALL NUMB.	RQ26 USING LOGIC TERMS	RQ28 UNDER STAND ING INIT. INSTR	RQ30 UNDER STAND ING DIS- PLAY MULT.	RQ32 TYP- ING EXACT SPEL.	RQ35 DIS- PLAY MSG.S TOO LONG	RQ36 SEL- ECT FROM LIST	RQ37 ENTER ING COM- ANDS	RQ38 RESP- ONSE TOO SLOW	RQ40 SIGNS AND BRO- CHURE	RQ41 STAFF AD- VICE	RQ42 HARD TO FIND FREE TERM
ABFR																		
TOTA	8094	8094	8094	8094	8094	8094	8094	8094	8094	8094	8094	8094	8094	8094	8094	8094	8094	8094
-2	2291	1461	1565	573	157	1849	1763	412	980	1324	1182	1040	714	626	902	1244	1671	870
-1	2952	2257	1752	1994	544	3646	3312	845	2251	3746	2954	3686	3370	2695	2952	3240	2446	2860
0	889	1012	935	1308	777	779	875	718	532	1055	980	1590	1489	1344	1192	1273	1161	1308
1	697	1554	442	2148	1027	827	736	390	522	648	1191	534	1080	1490	1442	691	437	1329
2	205	576	152	756	233	230	219	136	155	138	264	167	282	345	694	239	182	621
8	609	362	1079	425	553	173	504	714	133	430	183	344	283	754	71	493	1337	291
9	451	543	538	561	397	590	685	436	606	753	678	733	781	840	841	914	860	815
99	0	329	1631	329	4406	0	0	4443	2915	0	662	0	95	0	0	0	0	0
RELF																		
TOTA	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
-2	28.30	18.05	19.34	7.08	1.94	22.84	21.78	5.09	12.11	16.36	14.60	12.85	8.82	7.73	11.14	15.37	20.64	10.75
-1	36.47	27.88	21.65	24.64	6.72	45.05	40.92	10.44	27.81	46.28	36.50	45.54	41.64	33.30	36.47	40.03	30.22	35.33
0	10.98	12.50	11.55	16.16	9.60	9.62	10.81	8.87	6.57	13.03	12.11	19.64	18.40	16.60	14.73	15.73	14.34	16.16
1	8.61	19.20	5.46	26.54	12.69	10.22	9.09	4.82	6.45	8.01	14.71	6.60	13.34	18.41	17.82	8.54	5.40	16.42
2	2.53	7.12	1.88	9.34	2.88	2.84	2.71	1.68	1.91	1.70	3.26	2.06	3.48	4.26	8.57	2.95	2.25	7.67
8	7.52	4.47	13.33	5.25	6.83	2.14	6.23	8.82	1.64	5.31	2.26	4.25	3.50	9.32	.88	6.09	16.52	3.60
9	5.57	6.71	6.65	6.93	4.90	7.29	8.46	5.39	7.49	9.30	8.38	9.06	9.65	10.38	10.39	11.29	10.63	10.07
99	0.0	4.06	20.15	4.06	54.44	0.0	0.0	54.89	36.01	0.0	8.18	0.0	1.17	0.0	0.0	0.0	0.0	0.0

NEGATIVELY PHRASED LIKERT RQUESTIONS
(I.E., XXX IS DIFFICULT)
(MISSING VALS EXCLUDED)

	RQ11 SRCH BY TITLE	RQ13 SRCH BY SUBJ.	RQ15 SRCH BY AUTH/ TITLE	RQ17 FIND SUBJ. TERM	RQ19 INCR. RESULTS	RQ21 UNDER STAND ING EXPLN	RQ24 LOCAT CALL NUMB.	RQ26 USING LOGIC TERMS	RQ28 UNDER STAND ING INIT. INSTR	RQ30 UNDER STAND ING DISPLAY	RQ32 TYPING EXACT SPEL.	RQ35 DISPLAY MSG.S TOO LONG	RQ36 SELECT FROM LIST	RQ37 ENTER ING COMANDS	RQ38 RESPONSE TOO SLOW	RQ40 SIGNS AND BROCHURE	RQ41 STAFF ADVICE	RQ42 HARD TO FIND FREE TERM
ABFR																		
TOTA	7034	6860	4846	6779	2738	7331	6905	2501	4440	6911	6571	7017	6935	6500	7182	6687	5897	6988
-2	2291	1461	1565	573	157	1849	1763	412	980	1324	1182	1040	714	626	902	1244	1671	870
-1	2952	2257	1752	1994	544	3646	3312	845	2251	3746	2954	3686	3370	2695	2952	3240	2446	2860
0	889	1012	935	1308	777	779	875	718	532	1055	980	1590	1489	1344	1192	1273	1161	1308
1	697	1554	442	2148	1027	827	736	390	522	648	1191	534	1080	1490	1442	691	437	1329
2	205	576	152	756	233	230	219	136	155	138	264	167	282	345	694	239	182	621
RELF																		
TOTA	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
-2	32.57	21.30	32.29	8.45	5.73	25.22	25.53	16.47	22.07	19.16	17.99	14.82	10.30	9.63	12.56	18.60	28.34	12.45
-1	41.97	32.90	36.15	29.41	19.87	49.73	47.97	33.79	50.70	54.20	44.96	52.53	48.59	41.46	41.10	48.45	41.48	40.93
0	12.64	14.75	19.29	19.29	28.38	10.63	12.67	28.71	11.98	15.27	14.91	22.66	21.47	20.68	16.60	19.04	19.69	18.72
1	9.91	22.65	9.12	31.69	37.51	11.28	10.66	15.59	11.76	9.38	18.13	7.61	15.57	22.92	20.08	10.33	7.41	19.02
2	2.91	8.40	3.14	11.15	8.51	3.14	3.17	5.44	3.49	2.00	4.02	2.38	4.07	5.31	9.66	3.57	3.09	8.89
MEAN	-.91	-.36	-.85	.08	.23	-.83	-.82	-.40	-.76	-.79	-.55	-.70	-.45	-.27	-.27	-.68	-.85	-.29
STDE	1.05	1.27	1.07	1.18	1.04	1.03	1.03	1.10	1.03	.93	1.10	.90	1.00	1.08	1.20	1.01	1.02	1.17
SKEW	.944	.321	.772	-.050	-.327	.955	.917	.346	.909	.893	.577	.801	.634	.350	.426	.788	.821	.445
KURT	.263	-1.09	-.070	-1.07	-.604	.358	.310	-.574	.265	.619	-.569	.696	-.238	-.806	-.881	.219	.285	-.789
MEDI	-1.1	-.6	-1.0	.1	.4	-1.0	-1.0	-.5	-.9	-.9	-.8	-.8	-.7	-.5	-.6	-.9	-1.0	-.6
MODE	-1	-1	-1	1	1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1

POSITIVELY PHRASED LIKERT RQUESTIONS
(I.E., XXX IS EASY)
(MISSING VALS INCLUDED)

	RQ12 SRCH BY AUTH.	RQ14 SRCH BY CALL NUMB.	RQ16 REMEMBER COMMANDS	RQ18 SCANNING THRU LONG DISP.	RQ20 REDUCING RESULTS	RQ22 USING CODES OR ABREV	RQ23 ABREV ON SCRN.	RQ25 SRCH WITH TRUNCATE	RQ27 REMEMBER EXACT ORDER	RQ29 UNDERSTANDING DISPSING.	RQ31 INTERRUPT DISP.	RQ33 KNOW WHATS INCLUDED	RQ34 ORDER OF DISP. ITEMS	RQ39 AVAIL OF SIGNS ADEQUATE
ABFR														
TOTA	8094	8094	8094	8094	8094	8094	8094	8094	8094	8094	8094	8094	8094	8094
-2	192	199	259	430	329	223	241	333	151	115	307	464	188	393
-1	479	369	1191	1544	1245	935	989	1197	1182	535	989	2004	702	1077
0	681	956	1301	1317	1847	1274	1242	1602	1403	783	973	1876	1232	1098
1	3394	1287	3112	2850	1983	3236	3709	1858	3403	4139	2207	1956	4131	3568
2	2341	977	1237	823	522	1026	1032	531	786	1414	674	434	923	714
8	523	1803	464	511	1432	539	213	1278	493	278	869	598	203	369
9	484	382	530	619	736	609	668	633	676	830	584	762	715	875
99	0	2121	0	0	0	252	0	662	0	0	1491	0	0	0
RELF														
TOTA	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
-2	2.37	2.46	3.20	5.31	4.06	2.76	2.98	4.11	1.87	1.42	3.79	5.73	2.32	4.86
-1	5.92	4.56	14.71	19.08	15.38	11.55	12.22	14.79	14.60	6.61	12.22	24.76	8.67	13.31
0	8.41	11.81	16.07	16.27	22.82	15.74	15.34	19.79	17.33	9.67	12.02	23.18	15.22	13.57
1	41.93	15.90	38.45	35.21	24.50	39.98	45.82	22.96	42.04	51.14	27.27	24.17	51.04	44.08
2	28.92	12.07	15.28	10.17	6.45	12.68	12.75	6.56	9.71	17.47	8.33	5.36	11.40	8.82
8	6.46	22.28	5.73	6.31	17.69	6.66	2.63	15.79	6.09	3.43	10.74	7.39	2.51	4.56
9	5.98	4.72	6.55	7.65	9.09	7.52	8.25	7.82	8.35	10.25	7.22	9.41	8.83	10.81
99	0.0	26.20	0.0	0.0	0.0	3.11	0.0	8.18	0.0	0.0	18.42	0.0	0.0	0.0

POSITIVELY PHRASED LIKERT RQUESTIONS
(I.E., XXX IS EASY)
(MISSING VALS EXCLUDED)

	RQ12 SRCH BY AUTH.	RQ14 SRCH BY CALL NUMB.	RQ16 REMEMBER COM-MANDS	RQ18 SCAN-NING THRU LONG DISP.	RQ20 REDUCING RE-SULTS	RQ22 USING CODES OR ABREV	RQ23 ABREV ON SCRN.	RQ25 SRCH WITH TRUN-CATE	RQ27 REMEMBER EXACT ORDER	RQ29 UNDERSTANDING DISP SING.	RQ31 INTERRUPT DISP.	RQ33 KNOW WHATS INC-LUDED	RQ34 ORDER OF DISP. ITEMS	RQ39 AVAIL OF SIGNS ADE-QUATE
ABFR														
TOTA	7087	3788	7100	6964	5926	6694	7213	5521	6925	6986	5150	6734	7176	6850
-2	192	199	259	430	329	223	241	333	151	115	307	464	188	393
-1	479	369	1191	1544	1245	935	989	1197	1182	535	989	2004	702	1077
0	681	956	1301	1317	1847	1274	1242	1602	1403	783	973	1876	1232	1098
1	3394	1287	3112	2850	1983	3236	3709	1858	3403	4139	2207	1956	4131	3568
2	2341	977	1237	823	522	1026	1032	531	786	1414	674	434	923	714
RELF														
TOTA	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
-2	2.71	5.25	3.65	6.17	5.55	3.33	3.34	6.03	2.18	1.65	5.96	6.89	2.62	5.74
-1	6.76	9.74	16.77	22.17	21.01	13.97	13.71	21.68	17.07	7.66	19.20	29.76	9.78	15.72
0	9.61	25.24	18.32	18.91	31.17	19.03	17.22	29.02	20.26	11.21	18.89	27.86	17.17	16.03
1	47.89	33.98	43.83	40.92	33.46	48.34	51.42	33.65	49.14	59.25	42.85	29.05	57.57	52.09
2	33.03	25.79	17.42	11.82	8.81	15.33	14.31	9.62	11.35	20.24	13.09	6.44	12.86	10.42
MEAN	1.02	.65	.55	.30	.19	.58	.60	.19	.50	.89	.38	-.02	.68	.46
STDE	.97	1.12	1.07	1.12	1.04	1.01	1.00	1.07	.97	.87	1.11	1.06	.91	1.06
SKEW	-1.19	-.605	-.547	-.370	-.211	-.668	-.748	-.210	-.551	-1.08	-.476	.009	-.950	-.754
KURT	1.275	-.302	-.504	-.829	-.623	-.149	-.009	-.701	-.400	1.366	-.670	-.836	.764	-.231
MEDI	1.1	.8	.8	.6	.3	.8	.8	.3	.7	1.0	.6	-.0	.9	.7
MODE	1	1	1	1	1	1	1	1	1	1	1	-1	1	1

```
RQ43A     KEYBOARD CONFUSING


                                              RELATIVE  ADJUSTED    CUM
                                   ABSOLUTE     FREQ      FREQ      FREQ
CATEGORY LABEL              CODE     FREQ      (PCT)     (PCT)     (PCT)

YES                           1.      784       9.7      10.7      10.7

NO                            2.     6522      80.6      89.3     100.0

                              0.      788       9.7    MISSING    100.0
                                   -------    ------    ------
                           TOTAL     8094     100.0     100.0


MEAN           1.893     STD ERR        0.004       MEDIAN        1.940
MODE           2.000     STD DEV        0.310       VARIANCE      0.096
KURTOSIS       4.443     SKEWNESS      -2.538       RANGE         1.000
MINIMUM        1.000     MAXIMUM        2.000

VALID CASES     7306     MISSING CASES   788
```

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RQ43B     GLARE ON SCREEN

                                                   RELATIVE  ADJUSTED    CUM
                                        ABSOLUTE     FREQ      FREQ      FREQ
CATEGORY LABEL                   CODE     FREQ      (PCT)     (PCT)     (PCT)

YES                                1.      557        6.9       7.6       7.6

NO                                 2.     6774       83.7      92.4     100.0

                                   0.      763        9.4    MISSING    100.0
                                        ------     ------    ------
                                 TOTAL    8094      100.0     100.0

MEAN          1.924     STD ERR        0.003       MEDIAN        1.959
MODE          2.000     STD DEV        0.265       VARIANCE      0.070
KURTOSIS      8.250     SKEWNESS      -3.201       RANGE         1.000
MINIMUM       1.000     MAXIMUM        2.000

VALID CASES    7331     MISSING CASES   763
```

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RQ43C     LETTERS EASY TO READ

                                                    RELATIVE  ADJUSTED     CUM
                                          ABSOLUTE    FREQ      FREQ      FREQ
CATEGORY LABEL                     CODE     FREQ     (PCT)     (PCT)     (PCT)

YES                                  1      6437      79.5      87.9      87.9

NO                                  2.       882      10.9      12.1     100.0

                                    0.       775       9.6   MISSING     100.0
                                          ------    ------    ------
                                 TOTAL      8094     100.0     100.0

MEAN          1.121      STD ERR        0.004      MEDIAN          1.069
MODE          1.000      STD DEV        0.326      VARIANCE        0.106
KURTOSIS      3.438      SKEWNESS       2.332      RANGE           1.000
MINIMUM       1.000      MAXIMUM        2.000

VALID CASES    7319      MISSING CASES   775
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RECODED VARIABLES
FILE   FINAL    (CREATION DATE = 08/03/82)

RQ43D     LIGHTING TOO BRIGHT

                                                  RELATIVE  ADJUSTED     CUM
                                       ABSOLUTE     FREQ      FREQ      FREQ
CATEGORY LABEL                  CODE     FREQ      (PCT)     (PCT)     (PCT)

YES                               1.      572       7.1       7.8       7.8

NO                                2.     6743      83.3      92.2     100.0

                                  0.      779       9.6    MISSING    100.0
                                       ------    ------    ------
                               TOTAL     8094     100.0     100.0


MEAN          1.922     STD ERR        0.003      MEDIAN        1.958
MODE          2.000     STD DEV        0.268      VARIANCE      0.072
KURTOSIS      7.880     SKEWNESS      -3.143      RANGE         1.000
MINIMUM       1.000     MAXIMUM        2.000

VALID CASES    7315     MISSING CASES    779
```

```
CLR USER QUESTIONNAIRE: AGGREGATE FREQUENCIES                                        08/04/82      PAGE   39
RECODED VARIABLES
FILE   FINAL    (CREATION DATE = 08/03/82)

RQ43E     WRITING SPACE OK

                                                    RELATIVE  ADJUSTED    CUM
                                         ABSOLUTE     FREQ      FREQ      FREQ
CATEGORY LABEL                    CODE     FREQ      (PCT)     (PCT)     (PCT)

YES                                 1.     4665      57.6      63.9      63.9

NO                                  2.     2636      32.6      36.1     100.0

                                    0.      793       9.8    MISSING    100.0
                                         -------   -------   -------
                                 TOTAL     8094     100.0     100.0

MEAN           1.361     STD ERR         0.006      MEDIAN        1.283
MODE           1.000     STD DEV         0.480      VARIANCE      0.231
KURTOSIS      -1.666     SKEWNESS        0.579      RANGE         1.000
MINIMUM        1.000     MAXIMUM         2.000

VALID CASES     7301     MISSING CASES    793
```

```
RQ43F     NOISE DISTRACTING

                                                   RELATIVE  ADJUSTED    CUM
                                         ABSOLUTE    FREQ      FREQ      FREQ
CATEGORY LABEL                    CODE     FREQ     (PCT)     (PCT)     (PCT)

YES                                 1.      804       9.9      11.0      11.0

NO                                  2.     6497      80.3      89.0     100.0

                                    0.      793       9.8   MISSING     100.0
                                         -------   -------   -------
                                 TOTAL     8094     100.0     100.0

MEAN            1.890     STD ERR        0.004      MEDIAN        1.938
MODE            2.000     STD DEV        0.313      VARIANCE      0.098
KURTOSIS        4.208     SKEWNESS      -2.491      RANGE         1.000
MINIMUM         1.000     MAXIMUM        2.000

VALID CASES      7301     MISSING CASES    793
```

```
CLR USER QUESTIONNAIRE: AGGREGATE FREQUENCIES                                    08/04/82        PAGE   41
RECODED VARIABLES
FILE   FINAL    (CREATION DATE = 08/03/82)

RQ43G      TABLE HEIGHT RIGHT

                                               RELATIVE  ADJUSTED    CUM
                                     ABSOLUTE    FREQ      FREQ      FREQ
CATEGORY LABEL               CODE      FREQ      (PCT)     (PCT)     (PCT)

YES                            1.       597       7.4       8.2       8.2

NO                             2.      6679      82.5      91.8     100.0

                               0.       818      10.1    MISSING    100.0
                                     ------    ------    ------
                             TOTAL     8094     100.0     100.0

MEAN             1.918    STD ERR         0.003     MEDIAN        1.955
MODE             2.000    STD DEV         0.274     VARIANCE      0.075
KURTOSIS         7.283    SKEWNESS       -3.046     RANGE         1.000
MINIMUM          1.000    MAXIMUM         2.000

VALID CASES      7276     MISSING CASES   818
```

```
CLR USER QUESTIONNAIRE: AGGREGATE FREQUENCIES                                08/04/82        PAGE   42
RECODED VARIABLES
FILE   FINAL    (CREATION DATE = 08/03/82)

RQ43H     PRINTER EASY TO USE

                                                    RELATIVE  ADJUSTED    CUM
                                         ABSOLUTE     FREQ      FREQ      FREQ
CATEGORY LABEL                   CODE      FREQ      (PCT)     (PCT)     (PCT)

YES                                1.      1462       18.1      72.0      72.0

NO                                 2.       568        7.0      28.0     100.0

                                   0.       396        4.9    MISSING    100.0

NOT APPLICABLE                    99.      5668       70.0    MISSING    100.0
                                          ------     ------    ------
                                TOTAL      8094      100.0     100.0

MEAN           1.280      STD ERR        0.010      MEDIAN         1.194
MODE           1.000      STD DEV        0.449      VARIANCE       0.202
KURTOSIS      -1.037      SKEWNESS       0.982      RANGE          1.000
MINIMUM        1.000      MAXIMUM        2.000

VALID CASES     2030      MISSING CASES  6064
```

```
CLR USER QUESTIONNAIRE: AGGREGATE FREQUENCIES                                         08/04/82        PAGE   44
RECODED VARIABLES
FILE   FINAL    (CREATION DATE = 08/03/82)

GROUP RQUES143  WHEN I USE THE COMPUTER CATALOG TERMINAL
     (VALUE TABULATED =      1)

                                                                 PCT OF   PCT OF
DICHOTOMY LABEL                             NAME        COUNT  RESPONSES  CASES

KEYBOARD CONFUSING                          RQ43A         784       4.9     11.0

GLARE ON SCREEN                             RQ43B         557       3.5      7.8

LETTERS EASY TO READ                        RQ43C        6437      40.5     90.3

LIGHTING TOO BRIGHT                         RQ43D         572       3.6      8.0

WRITING SPACE OK                            RQ43E        4665      29.4     65.5

NOISE DISTRACTING                           RQ43F         804       5.1     11.3

TABLE HEIGHT RIGHT                          RQ43G         597       3.8      8.4

PRINTER EASY TO USE                         RQ43H        1462       9.2     20.5
                                                       -------     -----    -----
                                    TOTAL RESPONSES     15878     100.0    222.8

    967 MISSING CASES        7127 VALID CASES
```

```
CLR USER QUESTIONNAIRE: AGGREGATE FREQUENCIES                                    08/04/82        PAGE   45
RECODED VARIABLES
FILE   FINAL    (CREATION DATE = 08/03/82)

GROUP RQUEST44  ADDITIONAL SYSTEM FEATURES DESIRED:
     (VALUE TABULATED =      1)

                                                              PCT OF   PCT OF
DICHOTOMY LABEL                         NAME        COUNT   RESPONSES   CASES

STEP BY STEP INSTRUC                    RQ44A        1710        7.8     23.6

SEARCH BY TITLE WORD                    RQ44B        1284        5.9     17.7

SUBJECT WORD SEARCH                     RQ44C        1761        8.1     24.3

LIMIT BY DATE OF PUB                    RQ44D         810        3.7     11.2

LIMIT BY LANGUAGE                       RQ44E         672        3.1      9.3

JOURNAL TITLE ABBRV                     RQ44F        1415        6.5     19.5

CHANGE DISPLAY ORDER                    RQ44G         838        3.8     11.5

VIEW RELATED WORDS                      RQ44H        3230       14.8     44.5

SRCH FOR ILLUS & BIBL                   RQ44I        1260        5.8     17.4

SRCH BY CALL NUMBER                     RQ44J         610        2.8      8.4

PRINT SEARCH RESULTS                    RQ44K        1810        8.3     24.9

SRCH CONTENTS-INDEX                     RQ44L        3038       13.9     41.9

IF BOOK CHECKED OUT                     RQ44M        1906        8.7     26.3

LIB LOCATION OF BOOK                    RQ44N        1098        5.0     15.1

NONE                                    RQ44O         351        1.6      4.8
                                                  -------      -----    -----
                               TOTAL RESPONSES      21793      100.0    300.3

    838 MISSING CASES        7256 VALID CASES
```

```
CLR USER QUESTIONNAIRE: AGGREGATE FREQUENCIES                                   08/04/82        PAGE   46
RECODED VARIABLES
FILE    FINAL     (CREATION DATE = 08/03/82)

GROUP RQUEST45  COMPUTER CAT SERVICE IMPROVEMENTS DESIRE
     (VALUE TABULATED =      1)

                                                                 PCT OF  PCT OF
DICHOTOMY LABEL                         NAME          COUNT   RESPONSES   CASES

MORE TERMINALS                          RQ45A          3690        23.6    50.8

TERMS IN OTHER LOCAT                    RQ45B          2280        14.6    31.4

TERMS OUTSIDE LIBR                      RQ45C          2533        16.2    34.9

COMMAND CHART POSTED                    RQ45D          2110        13.5    29.1

MANUAL AT TERMINAL                      RQ45E          1463         9.3    20.1

MANUAL FOR PURCHASE                     RQ45F           608         3.9     8.4

TRAINING SESSIONS                       RQ45G          1005         6.4    13.8

A-V TRAINING PROGR                      RQ45H           806         5.1    11.1

NONE                                    RQ45I          1162         7.4    16.0
                                                    -------       -----   -----
                                 TOTAL RESPONSES      15657       100.0   215.6

    833 MISSING CASES        7261 VALID CASES
```

```
CLR USER QUESTIONNAIRE: AGGREGATE FREQUENCIES                                              08/04/82        PAGE   47
RECODED VARIABLES
FILE   FINAL    (CREATION DATE = 08/03/82)

GROUP RQUEST46  ADDITIONAL KINDS OF MATERIALS DESIRED:
     (VALUE TABULATED =      1)

                                                                        PCT OF   PCT OF
DICHOTOMY LABEL                                  NAME         COUNT   RESPONSES   CASES

DISSERTATIONS                                    RQ46A         1286        9.3     21.0

MOTION PICTURE FILMS                             RQ46B          876        6.4     14.3

GOV PUBLICATIONS                                 RQ46C         1729       12.6     28.3

JOURNAL TITLES                                   RQ46D         1392       10.1     22.8

MAPS                                             RQ46E          865        6.3     14.1

MANUSCRIPTS                                      RQ46F          523        3.8      8.5

MUSIC SCORES                                     RQ46G          479        3.5      7.8

NEWSPAPERS                                       RQ46H         1802       13.1     29.5

RECORDS OR TAPES                                 RQ46I         1247        9.1     20.4

TECHNICAL REPORTS                                RQ46J         1103        8.0     18.0

MORE OLDER BOOKS                                 RQ46K         1567       11.4     25.6

NONE                                             RQ46L          672        4.9     11.0

OTHER                                            RQ46M          232        1.7      3.8
                                                            --------     -----    -----
                                         TOTAL RESPONSES      13773      100.0    225.2

    1977 MISSING CASES        6117 VALID CASES
```

```
CLR USER QUESTIONNAIRE: AGGREGATE FREQUENCIES                                   08/04/82        PAGE   49
RECODED VARIABLES
FILE   FINAL    (CREATION DATE = 08/03/82)

RQ48       I COME TO THIS LIBRARY

                                               RELATIVE  ADJUSTED    CUM
                                    ABSOLUTE     FREQ      FREQ      FREQ
CATEGORY LABEL               CODE     FREQ      (PCT)     (PCT)     (PCT)

DAILY                          1.     1921       23.7      25.8      25.8

WEEKLY                         2.     3163       39.1      42.4      68.2

MONTHLY                        3.     1374       17.0      18.4      86.7

4 TIMES YEAR                   4.      550        6.8       7.4      94.0

ONCE A  YEAR                   5.      123        1.5       1.7      95.7

NOT BEFORE TODAY               6.      321        4.0       4.3     100.0

                               0.      642        7.9   MISSING     100.0
                                    ------     ------    ------
                            TOTAL     8094      100.0     100.0

MEAN          2.296     STD ERR        0.014      MEDIAN        2.071
MODE          2.000     STD DEV        1.220      VARIANCE      1.488
KURTOSIS      1.697     SKEWNESS       1.308      RANGE         5.000
MINIMUM       1.000     MAXIMUM        6.000

VALID CASES    7452     MISSING CASES    642
```

```
CLR USER QUESTIONNAIRE: AGGREGATE FREQUENCIES                                    08/04/82        PAGE   50
RECODED VARIABLES
FILE   FINAL    (CREATION DATE = 08/03/82)

RQ49       I USE THIS COMPUTER CATALOG

                                                  RELATIVE  ADJUSTED     CUM
                                        ABSOLUTE    FREQ      FREQ      FREQ
CATEGORY LABEL                   CODE     FREQ     (PCT)     (PCT)     (PCT)

EVERY   VISIT                     1.      1573      19.4      21.1      21.1

MOST    VISITS                    2.      2753      34.0      36.9      57.9

OCCASIONALLY                      3.      1998      24.7      26.8      84.7

RARELY                            4.       408       5.0       5.5      90.2

NOT BEFORE TODAY                  5.       735       9.1       9.8     100.0

                                  0.       627       7.7    MISSING    100.0
                                        ------    ------    ------
                                 TOTAL    8094     100.0     100.0

MEAN          2.461      STD ERR        0.014      MEDIAN        2.285
MODE          2.000      STD DEV        1.170      VARIANCE      1.370
KURTOSIS     -0.124      SKEWNESS       0.722      RANGE         4.000
MINIMUM       1.000      MAXIMUM        5.000

VALID CASES    7467      MISSING CASES   627
```

```
CLR USER QUESTIONNAIRE: AGGREGATE FREQUENCIES                                    08/04/82        PAGE   51
RECODED VARIABLES
FILE   FINAL    (CREATION DATE = 08/03/82)

RQ50      I USE LIB'S BK CRD OR MICRO CAT

                                                  RELATIVE  ADJUSTED    CUM
                                       ABSOLUTE     FREQ      FREQ      FREQ
CATEGORY LABEL                  CODE     FREQ      (PCT)     (PCT)     (PCT)

EVERY   VISIT                     1.      870      10.7      12.4      12.4

MOST    VISITS                    2.     1492      18.4      21.2      33.6

OCCASIONALLY                      3.     2418      29.9      34.4      68.0

RARELY                            4.     1495      18.5      21.3      89.3

NOT BEFORE TODAY                  5.      750       9.3      10.7     100.0

                                  0.      654       8.1   MISSING     100.0

                                 99.      415       5.1   MISSING     100.0
                                       -------   -------   -------
                               TOTAL     8094     100.0     100.0


MEAN            2.966      STD ERR        0.014      MEDIAN         2.976
MODE            3.000      STD DEV        1.160      VARIANCE       1.347
KURTOSIS       -0.735      SKEWNESS       0.000      RANGE          4.000
MINIMUM         1.000      MAXIMUM        5.000

VALID CASES      7025      MISSING CASES   1069
```

```
CLR USER QUESTIONNAIRE: AGGREGATE FREQUENCIES                                       08/04/82        PAGE   52
RECODED VARIABLES
FILE   FINAL    (CREATION DATE = 08/03/82)

RQ51       I USE ANOTHER COMPUTER SYSTEM

                                                   RELATIVE  ADJUSTED    CUM
                                        ABSOLUTE     FREQ      FREQ      FREQ
CATEGORY LABEL                  CODE      FREQ      (PCT)     (PCT)     (PCT)

DAILY                             1.       965       11.9      13.0      13.0

WEEKLY                            2.      1240       15.3      16.7      29.8

MONTHLY                           3.       964       11.9      13.0      42.8

4 TIMES A YEAR                    4.       880       10.9      11.9      54.6

ONCE A  YEAR                      5.       671        8.3       9.1      63.7

NEVER                             6.      2690       33.2      36.3     100.0

                                  0.       684        8.5    MISSING    100.0
                                        ------     ------     ------
                              TOTAL       8094      100.0      100.0

MEAN           3.961      STD ERR         0.022      MEDIAN         4.109
MODE           6.000      STD DEV         1.874      VARIANCE       3.513
KURTOSIS      -1.462      SKEWNESS       -0.240      RANGE          5.000
MINIMUM        1.000      MAXIMUM         6.000

VALID CASES     7410      MISSING CASES    684
```

```
CLR USER QUESTIONNAIRE: AGGREGATE FREQUENCIES                                          08/04/82        PAGE   53
RECODED VARIABLES
FILE   FINAL    (CREATION DATE = 08/03/82)

RQ52      HEARD ABOUT COMPUTER CAT FROM

                                              RELATIVE  ADJUSTED     CUM
                                    ABSOLUTE    FREQ      FREQ       FREQ
CATEGORY LABEL               CODE     FREQ      (PCT)     (PCT)      (PCT)

NOTICED TERM IN LIB            1.     4691      58.0      63.6       63.6

LIBRARY TOUR                   2.      750       9.3      10.2       73.8

ARTICLE-ANNOUNCE               3.      276       3.4       3.7       77.5

INSTRUCTOR                     4.      307       3.8       4.2       81.7

FRIEND - FAMILY                5.      688       8.5       9.3       91.0

LIBRARY STAFF                  6.      665       8.2       9.0      100.0

                               0.      717       8.9    MISSING     100.0
                                    ------    ------    ------
                             TOTAL    8094     100.0     100.0

MEAN          2.125       STD ERR       0.021       MEDIAN        1.286
MODE          1.000       STD DEV       1.762       VARIANCE      3.106
KURTOSIS     -0.071       SKEWNESS      1.252       RANGE         5.000
MINIMUM       1.000       MAXIMUM       6.000

VALID CASES    7377       MISSING CASES   717
```

```
CLR USER QUESTIONNAIRE: AGGREGATE FREQUENCIES                                   08/04/82        PAGE   55
RECODED VARIABLES
FILE   FINAL    (CREATION DATE = 08/03/82)

GROUP RQUEST53  I LEARNED HOW TO USE THIS COMP CAT:
     (VALUE TABULATED =      1)

                                                                PCT OF   PCT OF
DICHOTOMY LABEL                            NAME         COUNT  RESPONSES  CASES

FROM A FRIEND                              RQ53A         1151      10.1     15.5

BY PRINTED INSTR                           RQ53B         3955      34.7     53.3

BY INSTR ON TERMINAL                       RQ53C         2147      18.9     29.0

FROM LIBRARY STAFF                         RQ53D         2193      19.3     29.6

FROM LIBRARY COURSE                        RQ53E          458       4.0      6.2

AUDIO-VISUAL PROG                          RQ53F           15       0.1      0.2

BY MYSELF                                  RQ53G         1466      12.9     19.8
                                                       -------     -----    -----
                                   TOTAL RESPONSES      11385     100.0    153.6

    680 MISSING CASES         7414 VALID CASES
```

```
RQ54      MY AGE GROUP IS

                                                RELATIVE  ADJUSTED    CUM
                                      ABSOLUTE    FREQ      FREQ      FREQ
CATEGORY LABEL                 CODE     FREQ     (PCT)     (PCT)     (PCT)

14 AND  UNDER                    1.      134       1.7       1.8       1.8

15 - 19 YEARS                    2.     1458      18.0      19.6      21.4

20 - 24 YEARS                    3.     2813      34.8      37.8      59.2

25 - 34 YEARS                    4.     1978      24.4      26.6      85.7

35 - 44 YEARS                    5.      681       8.4       9.1      94.9

45 - 54 YEARS                    6.      222       2.7       3.0      97.8

55 - 64 YEARS                    7.       98       1.2       1.3      99.2

65 AND  OVER                     8.       63       0.8       0.8     100.0

                                 0.      647       8.0   MISSING     100.0
                                       ------    ------    ------
                              TOTAL     8094     100.0     100.0

VALID CASES     7447      MISSING CASES   647
```

```
CLR USER QUESTIONNAIRE: AGGREGATE FREQUENCIES                                        08/04/82        PAGE   58
RECODED VARIABLES
FILE   FINAL    (CREATION DATE = 08/03/82)

RQ55      SEX

                                                    RELATIVE  ADJUSTED    CUM
                                          ABSOLUTE    FREQ      FREQ      FREQ
CATEGORY LABEL                     CODE     FREQ     (PCT)     (PCT)     (PCT)

FEMALE                               1.     2953      36.5      40.1      40.1

MALE                                 2.     4414      54.5      59.9     100.0

                                     0.      727       9.0   MISSING     100.0
                                          ------    ------    ------
                                  TOTAL     8094     100.0     100.0

VALID CASES     7367      MISSING CASES    727
```

```
CLR USER QUESTIONNAIRE: AGGREGATE FREQUENCIES                                          08/04/82         PAGE   59
RECODED VARIABLES
FILE   FINAL    (CREATION DATE = 08/03/82)

RQ56       CURRENT OR HIGHEST GRADE COMPLETED

                                                  RELATIVE  ADJUSTED    CUM
                                        ABSOLUTE    FREQ      FREQ      FREQ
CATEGORY LABEL                    CODE    FREQ     (PCT)     (PCT)     (PCT)

GRADE   SCHOOL                     1.       74       0.9       1.0       1.0

HIGH    SCHOOL                     2.      668       8.3       9.0      10.0

SOME    COLLEGE                    3.     3431      42.4      46.2      56.2

COLLEGE GRADUATE                   4.     3251      40.2      43.8     100.0

                                   0.      670       8.3   MISSING     100.0
                                        ------    ------    ------
                                 TOTAL    8094     100.0     100.0

VALID CASES     7424       MISSING CASES    670
```

```
RQ57      MY ACADEMIC AREA IS

                                              RELATIVE  ADJUSTED    CUM
                                   ABSOLUTE     FREQ      FREQ      FREQ
CATEGORY LABEL              CODE     FREQ      (PCT)     (PCT)     (PCT)

ART AND HUMANITIES            1.     1266      15.6      26.1      26.1

PHYS-BIO SCIENCES             2.      564       7.0      11.6      37.7

SOCIAL  SCIENCES              3.      854      10.6      17.6      55.3

BUSINESS-MANAGEMENT           4.      645       8.0      13.3      68.6

EDUCATION                     5.      267       3.3       5.5      74.1

ENGINEERING                   6.      578       7.1      11.9      86.0

MEDICAL-HEALTH SCIEN          7.      270       3.3       5.6      91.5

LAW                           8.       95       1.2       2.0      93.5

MAJOR UNDECLARED              9.      167       2.1       3.4      96.9

INTERDISCIPLINARY            10.      150       1.9       3.1     100.0

                              0.      661       8.2    MISSING    100.0

                             99.     2577      31.8    MISSING    100.0
                                   -------   -------   -------
                          TOTAL      8094     100.0     100.0

VALID CASES    4856       MISSING CASES  3238
```

```
RECODED VARIABLES
FILE   FINAL    (CREATION DATE = 08/03/82)

GROUP RQUEST58  THE MAIN FOCUS OF MY ACADEMIC WORK IS:
     (VALUE TABULATED =      1)

                                                          PCT OF  PCT OF
DICHOTOMY LABEL                           NAME      COUNT RESPONSES CASES

COURSE WORK                               RQ58A      3565    61.2    74.4

TEACHING                                  RQ58B       456     7.8     9.5

RESEARCH                                  RQ58C      1807    31.0    37.7
                                                 --------   -----   -----
                                TOTAL RESPONSES      5828   100.0   121.7

   3305 MISSING CASES        4789 VALID CASES
```

```
RQ59      PRESENT AFFILIATION

                                                RELATIVE  ADJUSTED     CUM
                                      ABSOLUTE    FREQ      FREQ      FREQ
CATEGORY LABEL                 CODE     FREQ     (PCT)     (PCT)     (PCT)

FRESHMAN-SOPHOMORE               1.     1223      15.1      25.7      25.7

JUNIOR--SENIOR                   2.     1618      20.0      34.1      59.8

GRADUATE-MASTERS LEV             3.      637       7.9      13.4      73.2

GRADUATE-DOCTORAL LE             4.      461       5.7       9.7      82.9

GRADUATE-PROFESSIONA             5.      110       1.4       2.3      85.2

FACULTY                          6.      189       2.3       4.0      89.2

STAFF                            7.      133       1.6       2.8      92.0

OTHER   STATUS                   8.      380       4.7       8.0     100.0

                                 0.      766       9.5   MISSING     100.0

                                99.     2577      31.8   MISSING     100.0
                                      -------   ------    ------
                              TOTAL     8094     100.0     100.0

VALID CASES    4751      MISSING CASES  3343
```

Appendix D

RESPONSES BY TYPE OF LIBRARY FOR THE USER QUESTIONNAIRE

This appendix includes computer listings of questionnaire data from the Statistical Package for the Social Sciences (SPSS). Page numbering in this appendix is that of the original computer listings, and does not correspond to the numbering for the report as a whole. Page references in the text are to the internal numbers in this appendix.

```
CLR USER QUESTIONNAIRE: LIBRARY TYPE COMPARISON XTABS                                08/05/82        PAGE   17

FILE   FINAL    (CREATION DATE = 08/03/82)

* * * * * * * * * * * *  C R O S S T A B U L A T I O N  * * * * * * * * * * * *
   RQUEST1  (TABULATING     1) I CAME TO THE SEARCH WITH:
BY LIBTYPE  LIBRARY GROUPING BY TYPE OF LIBRARY
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * PAGE   1 OF   1

                        LIBTYPE

                 COUNT  IA.R.L. L OTHER AC COMMUNIT PUBLIC    STATE AN
               ROW PCT  IIBS      ADEMIC   Y COLLEG           D FEDERA    ROW
               COL PCT  I                  E                  L           TOTAL
                        I       1 I      2 I      3 I      4 I      5 I
RQUEST1        ---------I---------I--------I--------I--------I--------I
             RQ1A       I  2018   I   251  I    50  I   789  I   197  I   3305
   COMPLETE AUTHOR      I  61.1   I   7.6  I   1.5  I  23.9  I   6.0  I   41.9
                        I  44.6   I  38.0  I  32.3  I  39.1  I  37.4  I
                        I---------I--------I--------I--------I--------I
             RQ1B       I   640   I    78  I    17  I   199  I    64  I    998
   PART AUTHOR'S NAME   I  64.1   I   7.8  I   1.7  I  19.9  I   6.4  I   12.7
                        I  14.1   I  11.8  I  11.0  I   9.9  I  12.1  I
                        I---------I--------I--------I--------I--------I
             RQ1C       I  1831   I   276  I    52  I   777  I   162  I   3098
   COMPLETE TITLE       I  59.1   I   8.9  I   1.7  I  25.1  I   5.2  I   39.3
                        I  40.5   I  41.8  I  33.5  I  38.5  I  30.7  I
                        I---------I--------I--------I--------I--------I
             RQ1D       I   532   I    70  I    16  I   191  I    49  I    858
   PART TITLE           I  62.0   I   8.2  I   1.9  I  22.3  I   5.7  I   10.9
                        I  11.8   I  10.6  I  10.3  I   9.5  I   9.3  I
                        I---------I--------I--------I--------I--------I
             RQ1E       I  1255   I   239  I    37  I   513  I   221  I   2265
   TOPIC WORD OR WORDS  I  55.4   I  10.6  I   1.6  I  22.6  I   9.8  I   28.7
                        I  27.7   I  36.2  I  23.9  I  25.4  I  41.9  I
                        I---------I--------I--------I--------I--------I
             RQ1F       I  1878   I   264  I   103  I   976  I   282  I   3503
   SUBJECT HEADING      I  53.6   I   7.5  I   2.9  I  27.9  I   8.1  I   44.4
                        I  41.5   I  40.0  I  66.5  I  48.4  I  53.5  I
                        I---------I--------I--------I--------I--------I
             RQ1G       I   273   I    19  I     5  I    81  I    14  I    392
   COMPLETE CALL NUMBER I  69.6   I   4.8  I   1.3  I  20.7  I   3.6  I    5.0
                        I   6.0   I   2.9  I   3.2  I   4.0  I   2.7  I
                        I---------I--------I--------I--------I--------I
             RQ1H       I    52   I     7  I     2  I    20  I     3  I     84
   PART CALL NUMBER     I  61.9   I   8.3  I   2.4  I  23.8  I   3.6  I    1.1
                        I   1.1   I   1.1  I   1.3  I   1.0  I   0.6  I
                        I---------I--------I--------I--------I--------I
                COLUMN     4524       660      155     2018      527      7884
                 TOTAL     57.4       8.4      2.0     25.6      6.7     100.0

PERCENTS AND TOTALS BASED ON RESPONDENTS

   7884 VALID CASES         210 MISSING CASES
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FILE   FINAL    (CREATION DATE = 08/03/82)

* * * * * * * * * * * *  C R O S S T A B U L A T I O N  * * * * * * * * * * * *
   RQUEST2  (TABULATING      1) IN THIS SEARCH I WAS TRYING TO FIND:
BY LIBTYPE  LIBRARY GROUPING BY TYPE OF LIBRARY
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * PAGE   1 OF   1

                        LIBTYPE

                  COUNT  IA.R.L. L OTHER AC COMMUNIT PUBLIC    STATE AN
                ROW PCT  IIBS      ADEMIC   Y COLLEG           D FEDERA   ROW
                COL PCT  I                  E                  L          TOTAL
                         I      1  I      2 I      3 I      4  I     5  I
RQUEST2         --------I--------I--------I--------I--------I--------I
                RQ2A     I  2345   I   324  I    66  I   991  I   193  I   3919
  SPECIFIC BOOK ETC      I  59.8   I   8.3  I   1.7  I  25.3  I   4.9  I   50.1
                         I  52.3   I  49.3  I  42.9  I  49.4  I  37.3  I
                         I--------I--------I--------I--------I--------I
                RQ2B     I  2287   I   355  I    99  I  1080  I   355  I   4176
  BOOKS ON TOPIC         I  54 8   I   8.5  I   2.4  I  25.9  I   8.5  I   53.4
                         I  51.0   I  54.0  I  64.3  I  53.9  I  68.7  I
                         I--------I--------I--------I--------I--------I
                RQ2C     I  1098   I   135  I    31  I   472  I   108  I   1844
  BOOKS BY SPEC AUTHOR   I  59.5   I   7.3  I   1.7  I  25.6  I   5.9  I   23.6
                         I  24.5   I  20.5  I  20.1  I  23.5  I  20.9  I
                         I--------I--------I--------I--------I--------I
                RQ2D     I   228   I    55  I    10  I    66  I    52  I    411
  PUB-DATE-SPELLING      I  55.5   I  13.4  I   2.4  I  16.1  I  12.7  I    5.3
                         I   5.1   I   8.4  I   6.5  I   3.3  I  10.1  I
                         I--------I--------I--------I--------I--------I
                RQ2E     I   786   I    90  I    28  I   381  I    23  I   1308
  IF BOOK IS AVAILABLE   I  60.1   I   6.9  I   2.1  I  29.1  I   1.8  I   16.7
                         I  17.5   I  13.7  I  18.2  I  19.0  I   4.4  I
                         I--------I--------I--------I--------I--------I
                RQ2F     I   313   I   104  I     9  I   140  I    10  I    576
  OTHER LIBRARY W BOOK   I  54.3   I  18.1  I   1.6  I  24.3  I   1.7  I    7.4
                         I   7.0   I  15.8  I   5.8  I   7.0  I   1.9  I
                         I--------I--------I--------I--------I--------I
                 COLUMN     4483       657      154     2005      517      7816
                  TOTAL     57.4       8.4      2.0     25.7      6.6     100.0

PERCENTS AND TOTALS BASED ON RESPONDENTS

   7816 VALID CASES          278 MISSING CASES
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CLR USER QUESTIONNAIRE: LIBRARY TYPE COMPARISON XTABS                              08/05/82        PAGE   19

FILE   FINAL    (CREATION DATE = 08/03/82)

* * * * * * * * * * * *  C R O S S T A B U L A T I O N  * * * * * * * * * * * *
   RQUEST3  (TABULATING     1) I SEARCHED FOR WHAT I WANTED BY:
BY LIBTYPE  LIBRARY GROUPING BY TYPE OF LIBRARY
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * PAGE   1 OF   1

                         LIBTYPE

                  COUNT  IA.R.L. L OTHER AC COMMUNIT PUBLIC    STATE AN
                ROW PCT  IIBS      ADEMIC   Y COLLEG           D FEDERA   ROW
                COL PCT  I                  E                  L          TOTAL
                         I     1  I     2  I     3  I     4  I     5  I
RQUEST3         --------I--------I--------I--------I--------I--------I
            RQ3A         I  1760  I   231  I    41  I   738  I   188  I   2958
  COMPLETE AUTHOR        I  59.5  I   7.8  I   1.4  I  24.9  I   6.4  I   38.0
                         I  39.4  I  35.7  I  26.6  I  36.9  I  36.1  I
                         I--------I--------I--------I--------I--------I
            RQ3B         I   788  I    97  I    15  I   203  I    65  I   1168
  PART AUTHOR'S NAME     I  67.5  I   8.3  I   1.3  I  17.4  I   5.6  I   15.0
                         I  17.7  I  15.0  I   9.7  I  10.1  I  12.5  I
                         I--------I--------I--------I--------I--------I
            RQ3C         I  1594  I   258  I    48  I   725  I   137  I   2762
  COMPLETE TITLE         I  57.7  I   9.3  I   1.7  I  26.2  I   5.0  I   35.5
                         I  35.7  I  39.9  I  31.2  I  36.2  I  26.3  I
                         I--------I--------I--------I--------I--------I
            RQ3D         I   694  I   105  I    20  I   231  I    56  I   1106
  PART TITLE             I  62.7  I   9.5  I   1.8  I  20.9  I   5.1  I   14.2
                         I  15.6  I  16.2  I  13.0  I  11.5  I  10.7  I
                         I--------I--------I--------I--------I--------I
            RQ3E         I  1246  I   238  I    37  I   573  I   232  I   2326
  TOPIC WORD OR WORDS    I  53.6  I  10.2  I   1.6  I  24.6  I  10.0  I   29.9
                         I  27.9  I  36.8  I  24.0  I  28.6  I  44.5  I
                         I--------I--------I--------I--------I--------I
            RQ3F         I  1798  I   240  I   103  I   944  I   290  I   3375
  SUBJECT HEADINGS       I  53.3  I   7.1  I   3.1  I  28.0  I   8.6  I   43.4
                         I  40.3  I  37.1  I  66.9  I  47.2  I  55.7  I
                         I--------I--------I--------I--------I--------I
            RQ3G         I   262  I     2  I     3  I    62  I    15  I    344
  COMPLETE CALL NUMBER   I  76.2  I   0.6  I   0.9  I  18.0  I   4.4  I    4.4
                         I   5.9  I   0.3  I   1.9  I   3.1  I   2.9  I
                         I--------I--------I--------I--------I--------I
            RQ3H         I    32  I     0  I     2  I    23  I     4  I     61
  PART CALL NUMBER       I  52.5  I   0.0  I   3.3  I  37.7  I   6.6  I    0.8
                         I   0.7  I   0.0  I   1.3  I   1.1  I   0.8  I
                         I--------I--------I--------I--------I--------I
                 COLUMN     4462      647      154     2001      521      7785
                  TOTAL     57.3      8.3      2.0     25.7      6.7     100.0

 PERCENTS AND TOTALS BASED ON RESPONDENTS

    7785 VALID CASES         309 MISSING CASES
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CLR USER QUESTIONNAIRE: LIBRARY TYPE COMPARISON XTABS                             08/05/82         PAGE   20

FILE   FINAL    (CREATION DATE = 08/03/82)

* * * * * * * * * * * *  C R O S S T A B U L A T I O N  * * * * * * * * * * * *
   RQUEST4  (TABULATING      1) I NEED THIS INFORMATION FOR:
BY LIBTYPE  LIBRARY GROUPING BY TYPE OF LIBRARY
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * PAGE   1 OF   2

                         LIBTYPE

                   COUNT  IA.R.L. L OTHER AC COMMUNIT PUBLIC    STATE AN
                 ROW PCT IIBS      ADEMIC   Y COLLEG           D FEDERA   ROW
                 COL PCT I                  E                  L          TOTAL
                         I     1  I     2  I     3  I     4  I     5  I
RQUEST4         --------I--------I--------I--------I--------I--------I
             RQ4A        I   562  I    67  I    21  I   621  I    36  I   1307
  RECREATIONAL USES      I  43.0  I   5.1  I   1.6  I  47.5  I   2.8  I   16.8
                         I  12.6  I  10.2  I  13.6  I  31.1  I   6.9  I
                         I--------I--------I--------I--------I--------I
             RQ4B        I    82  I     9  I     7  I   144  I     4  I    246
  MAKE-FIX SOMETHING     I  33.3  I   3.7  I   2.8  I  58.5  I   1.6  I    3.2
                         I   1.8  I   1.4  I   4.5  I   7.2  I   0.8  I
                         I--------I--------I--------I--------I--------I
             RQ4C        I   663  I    91  I     8  I   338  I   221  I   1321
  WORK OR JOB            I  50.2  I   6.9  I   0.6  I  25.6  I  16.7  I   16.9
                         I  14.8  I  13.8  I   5.2  I  17.0  I  42.3  I
                         I--------I--------I--------I--------I--------I
             RQ4D        I  1035  I   148  I    39  I  1009  I   103  I   2334
  PERSONAL INTEREST      I  44.3  I   6.3  I   1.7  I  43.2  I   4.4  I   29.9
                         I  23.2  I  22.5  I  25.3  I  50.6  I  19.7  I
                         I--------I--------I--------I--------I--------I
             RQ4E        I   270  I    27  I    13  I   271  I    21  I    602
  HOBBY                  I  44.9  I   4.5  I   2.2  I  45.0  I   3.5  I    7.7
                         I   6.0  I   4.1  I   8.4  I  13.6  I   4.0  I
                         I--------I--------I--------I--------I--------I
             RQ4F        I  1473  I   251  I    87  I   346  I    81  I   2238
  CLASS-COURSE READING   I  65.8  I  11.2  I   3.9  I  15.5  I   3.6  I   28.7
                         I  33.0  I  38.1  I  56.5  I  17.4  I  15.5  I
                         I--------I--------I--------I--------I--------I
             RQ4G        I  2018  I   334  I    88  I   421  I   151  I   3012
  COURSE PAPER-REPORT    I  67.0  I  11.1  I   2.9  I  14.0  I   5.0  I   38.6
                         I  45.1  I  50.8  I  57.1  I  21.1  I  28.9  I
                         I--------I--------I--------I--------I--------I
             RQ4H        I   524  I    59  I    11  I    78  I    83  I    755
  THESIS-DISSERTATION    I  69.4  I   7.8  I   1.5  I  10.3  I  11.0  I    9.7
                         I  11.7  I   9.0  I   7.1  I   3.9  I  15.9  I
                         I--------I--------I--------I--------I--------I
                  COLUMN    4470      658      154     1994      523     7799
                   TOTAL    57.3      8.4      2.0     25.6      6.7    100.0

PERCENTS AND TOTALS BASED ON RESPONDENTS

(CONTINUED)
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FILE   FINAL    (CREATION DATE = 08/03/82)

* * * * * * * * * * * *  C R O S S T A B U L A T I O N  * * * * * * * * * * * *
   RQUEST4  (TABULATING     1) I NEED THIS INFORMATION FOR:
BY LIBTYPE  LIBRARY GROUPING BY TYPE OF LIBRARY
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * PAGE   2 OF   2

                     LIBTYPE

                COUNT  IA.R.L. L OTHER AC COMMUNIT PUBLIC    STATE AN
              ROW PCT  IIBS      ADEMIC   Y COLLEG           D FEDERA   ROW
              COL PCT  I                  E                  L          TOTAL
                       I     1  I     2  I     3  I     4  I     5  I
RQUEST4       --------I--------I--------I--------I--------I--------I
              RQ4I     I   335  I    46  I     3  I    66  I   110  I    560
  PUBLICATION          I  59.8  I   8.2  I   0.5  I  11.8  I  19.6  I    7.2
                       I   7.5  I   7.0  I   1.9  I   3.3  I  21.0  I
                       I--------I--------I--------I--------I--------I
              RQ4J     I   206  I    37  I     6  I    73  I    36  I    358
  TEACHING A COURSE    I  57.5  I  10.3  I   1.7  I  20.4  I  10.1  I    4.6
                       I   4.6  I   5.6  I   3.9  I   3.7  I   6.9  I
                       I--------I--------I--------I--------I--------I
              RQ4K     I   597  I    96  I    19  I   302  I    93  I   1107
  KEEP UP ON TOPIC     I  53.9  I   8.7  I   1.7  I  27.3  I   8.4  I   14.2
                       I  13.4  I  14.6  I  12.3  I  15.1  I  17.8  I
                       I--------I--------I--------I--------I--------I
               COLUMN     4470      658      154     1994      523     7799
                TOTAL     57.3      8.4      2.0     25.6      6.7    100.0

PERCENTS AND TOTALS BASED ON RESPONDENTS

   7799 VALID CASES         295 MISSING CASES
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CLR USER QUESTIONNAIRE: LIBRARY TYPE COMPARISON XTABS                          08/05/82        PAGE   23

FILE   FINAL    (CREATION DATE = 08/03/82)

* * * * * * * * * * * * * * * * * * * * *   C R O S S T A B U L A T I O N   O F   * * * * * * * * * * * * * * * * * * * * *
   RQ5       IN THIS SEARCH I FOUND                              BY  LIBTYPE   LIBRARY GROUPING BY TYPE OF LIBRARY
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * PAGE  1 OF  1

                  LIBTYPE
          COUNT  I
        ROW PCT  IA.R.L. L OTHER AC COMMUNIT PUBLIC    STATE AN   ROW
        COL PCT  IIBS      ADEMIC   Y COLLEG           D FEDERA  TOTAL
        TOT PCT  I      1.I      2.I      3.I      4.I      5.I
RQ5     ---------I--------I--------I--------I--------I--------I
             1.  I   655  I   114  I    30  I   386  I    95  I   1280
  MORE   THAN    I  51.2  I   8.9  I   2.3  I  30.2  I   7.4  I   16.6
                 I  14.8  I  17.5  I  19.9  I  19.7  I  18.3  I
                 I   8.5  I   1.5  I   0.4  I   5.0  I   1.2  I
                -I--------I--------I--------I--------I--------I
             2.  I  1162  I   198  I    42  I   621  I    99  I   2122
  ALL OR  MOST   I  54.8  I   9.3  I   2.0  I  29.3  I   4.7  I   27.5
                 I  26.3  I  30.4  I  27.8  I  31.7  I  19.1  I
                 I  15.1  I   2.6  I   0.5  I   8.1  I   1.3  I
                -I--------I--------I--------I--------I--------I
             3.  I  1776  I   264  I    62  I   668  I   280  I   3050
  SOME           I  58.2  I   8.7  I   2.0  I  21.9  I   9.2  I   39.6
                 I  40.2  I  40.5  I  41.1  I  34.1  I  54.1  I
                 I  23.1  I   3.4  I   0.8  I   8.7  I   3.6  I
                -I--------I--------I--------I--------I--------I
             4.  I   829  I    76  I    17  I   286  I    44  I   1252
  NOTHING        I  66.2  I   6.1  I   1.4  I  22.8  I   3.5  I   16.3
                 I  18.7  I  11.7  I  11.3  I  14.6  I   8.5  I
                 I  10.8  I   1.0  I   0.2  I   3.7  I   0.6  I
                -I--------I--------I--------I--------I--------I
         COLUMN     4422      652      151     1961      518     7704
          TOTAL     57.4      8.5      2.0     25.5      6.7    100.0

CHI SQUARE =    145.24255 WITH  12 DEGREES OF FREEDOM   SIGNIFICANCE =  0.0000
PEARSON'S R =-0.07877  SIGNIFICANCE =  0.0000

NUMBER OF MISSING OBSERVATIONS =      390
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CLR USER QUESTIONNAIRE: LIBRARY TYPE COMPARISON XTABS                              08/05/82       PAGE   24

FILE   FINAL    (CREATION DATE = 08/03/82)

* * * * * * * * * * * * * * * * * * *   C R O S S T A B U L A T I O N   O F   * * * * * * * * * * * * * * * * * * *
   RQ6      IN REL TO WHAT I WAS LOOKING FOR SEARCH      BY  LIBTYPE   LIBRARY GROUPING BY TYPE OF LIBRARY
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *  PAGE  1 OF  1

                 LIBTYPE
         COUNT  I
       ROW PCT  IA.R.L. L OTHER AC COMMUNIT PUBLIC    STATE AN  ROW
       COL PCT  IIBS      ADEMIC   Y COLLEG           D FEDERA  TOTAL
       TOT PCT  I      1.I      2.I      3.I      4.I      5.I
RQ6    --------I--------I--------I--------I--------I--------I
            1.  I  1928  I   345  I    77  I   979  I   258  I  3587
  VERY SATISFACTOR I  53.7  I   9.6  I   2.1  I  27.3  I   7.2  I  46.5
                I  43.6  I  52.6  I  50.0  I  49.7  I  50.2  I
                I  25.0  I   4.5  I   1.0  I  12.7  I   3.3  I
               -I--------I--------I--------I--------I--------I
            2.  I  1499  I   212  I    60  I   626  I   193  I  2590
  SOMEWHAT SATISFA I  57.9  I   8.2  I   2.3  I  24.2  I   7.5  I  33.6
                I  33.9  I  32.3  I  39.0  I  31.8  I  37.5  I
                I  19.4  I   2.7  I   0.8  I   8.1  I   2.5  I
               -I--------I--------I--------I--------I--------I
            3.  I   490  I    59  I    12  I   202  I    42  I   805
  SOMEWHAT UNSATIS I  60.9  I   7.3  I   1.5  I  25.1  I   5.2  I  10.4
                I  11.1  I   9.0  I   7.8  I  10.3  I   8.2  I
                I   6.3  I   0.8  I   0.2  I   2.6  I   0.5  I
               -I--------I--------I--------I--------I--------I
            4.  I   508  I    40  I     5  I   162  I    21  I   736
  VERY UNSATISFACT I  69.0  I   5.4  I   0.7  I  22.0  I   2.9  I   9.5
                I  11.5  I   6.1  I   3.2  I   8.2  I   4.1  I
                I   6.6  I   0.5  I   0.1  I   2.1  I   0.3  I
               -I--------I--------I--------I--------I--------I
         COLUMN     4425      656      154     1969      514     7718
          TOTAL     57.3      8.5      2.0     25.5      6.7    100.0

CHI SQUARE =     84.01668 WITH  12 DEGREES OF FREEDOM   SIGNIFICANCE =  0.0000
PEARSON'S R =-0.07807  SIGNIFICANCE =  0.0000

NUMBER OF MISSING OBSERVATIONS =      376
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FILE   FINAL    (CREATION DATE = 08/03/82)

* * * * * * * * * * * * * * * * * * *   C R O S S T A B U L A T I O N   O F   * * * * * * * * * * * * * * * * * * *
   RQ7        CAME ACROSS OTHER THINGS OF INTEREST          BY  LIBTYPE   LIBRARY GROUPING BY TYPE OF LIBRARY
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *  PAGE  1 OF   1

                LIBTYPE
          COUNT I
        ROW PCT IA.R.L. L OTHER AC COMMUNIT PUBLIC    STATE AN   ROW
        COL PCT IIBS      ADEMIC   Y COLLEG           D FEDERA  TOTAL
        TOT PCT I      1.I      2.I      3.I      4.I      5.I
RQ7     --------I--------I--------I--------I--------I--------I
             1. I  2032  I   341  I    78  I  1055  I   329  I  3835
  YES           I  53.0  I   8.9  I   2.0  I  27.5  I   8.6  I  49.8
                I  46.0  I  52.1  I  51.0  I  53.8  I  63.8  I
                I  26.4  I   4.4  I   1.0  I  13.7  I   4.3  I
               -I--------I--------I--------I--------I--------I
             2. I  2387  I   313  I    75  I   905  I   187  I  3867
  NO            I  61.7  I   8.1  I   1.9  I  23.4  I   4.8  I  50.2
                I  54.0  I  47.9  I  49.0  I  46.2  I  36.2  I
                I  31.0  I   4.1  I   1.0  I  11.8  I   2.4  I
               -I--------I--------I--------I--------I--------I
         COLUMN    4419      654      153     1960      516     7702
          TOTAL    57.4      8.5      2.0     25.4      6.7    100.0

CHI SQUARE =     80.20195 WITH   4 DEGREES OF FREEDOM   SIGNIFICANCE =  0.0000
PEARSON'S R =-0.09554  SIGNIFICANCE =  0.0000

NUMBER OF MISSING OBSERVATIONS =      392
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CLR USER QUESTIONNAIRE: LIBRARY TYPE COMPARISON XTABS                        08/05/82        PAGE   27

FILE   FINAL    (CREATION DATE = 08/03/82)

* * * * * * * * * * *  C R O S S T A B U L A T I O N  * * * * * * * * * * *
   RQUEST8  (TABULATING     1) I GOT HELP FROM:
BY LIBTYPE  LIBRARY GROUPING BY TYPE OF LIBRARY
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * PAGE   1 OF   1

                            LIBTYPE

                    COUNT  IA.R.L. L OTHER AC COMMUNIT PUBLIC    STATE AN
                  ROW PCT  IIBS      ADEMIC   Y COLLEG           D FEDERA   ROW
                  COL PCT  I                  E                  L          TOTAL
                           I     1  I     2  I     3  I     4  I     5  I
RQUEST8           --------I--------I--------I--------I--------I--------I
             RQ8A          I  1819  I   233  I    49  I   708  I   324  I   3133
  PRINTED MATTER-SIGNS     I  58.1  I   7.4  I   1.6  I  22.6  I  10.3  I   40.6
                           I  41.2  I  35.5  I  32.0  I  35.9  I  62.4  I
                           I--------I--------I--------I--------I--------I
             RQ8B          I  1456  I   226  I    79  I   528  I   175  I   2464
  TERMINAL SCREEN INST     I  59.1  I   9.2  I   3.2  I  21.4  I   7.1  I   32.0
                           I  33.0  I  34.4  I  51.6  I  26.8  I  33.7  I
                           I--------I--------I--------I--------I--------I
             RQ8C          I   516  I   218  I    48  I   668  I   260  I   1710
  LIBRARY STAFF MEMBER     I  30.2  I  12.7  I   2.8  I  39.1  I  15.2  I   22.2
                           I  11.7  I  33.2  I  31.4  I  33.9  I  50.1  I
                           I--------I--------I--------I--------I--------I
             RQ8D          I   196  I    26  I    10  I   165  I    37  I    434
  PERSON NEARBY            I  45.2  I   6.0  I   2.3  I  38.0  I   8.5  I    5.6
                           I   4.4  I   4.0  I   6.5  I   8.4  I   7.1  I
                           I--------I--------I--------I--------I--------I
             RQ8E          I  1548  I   198  I    37  I   528  I    83  I   2394
  I DID NOT GET HELP       I  64.7  I   8.3  I   1.5  I  22.1  I   3.5  I   31.0
                           I  35.1  I  30.1  I  24.2  I  26.8  I  16.0  I
                           I--------I--------I--------I--------I--------I
                   COLUMN     4412      657      153     1970      519      7711
                    TOTAL     57.2      8.5      2.0     25.5      6.7     100.0

PERCENTS AND TOTALS BASED ON RESPONDENTS

   7711 VALID CASES          383 MISSING CASES
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CLR USER QUESTIONNAIRE: LIBRARY TYPE COMPARISON XTABS                                08/05/82        PAGE   29

FILE   FINAL    (CREATION DATE = 08/03/82)

* * * * * * * * * * * * * * * * * * * *   C R O S S T A B U L A T I O N   O F   * * * * * * * * * * * * * * * * * * *
   RQ9       GENERAL ATTITUDE TOWARD COMPUTER CAT IS      BY  LIBTYPE   LIBRARY GROUPING BY TYPE OF LIBRARY
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * PAGE  1 OF  1

                  LIBTYPE
          COUNT  I
        ROW PCT  IA.R.L. L OTHER AC COMMUNIT PUBLIC    STATE AN  ROW
        COL PCT  IIBS      ADEMIC   Y COLLEG           D FEDERA  TOTAL
        TOT PCT  I      1.I      2.I      3.I      4.I      5.I
RQ9     --------I--------I--------I--------I--------I--------I
             1.  I  2977  I   481  I   119  I  1194  I   403  I  5174
  VERY FAVORABLE I  57.5  I   9.3  I   2.3  I  23.1  I   7.8  I  67.0
                 I  67.5  I  73.4  I  77.8  I  60.2  I  77.5  I
                 I  38.6  I   6.2  I   1.5  I  15.5  I   5.2  I
                -I--------I--------I--------I--------I--------I
             2.  I  1133  I   144  I    29  I   561  I    95  I  1962
  SOMEWHAT FAVORAB I  57.7  I   7.3  I   1.5  I  28.6  I   4.8  I  25.4
                 I  25.7  I  22.0  I  19.0  I  28.3  I  18.3  I
                 I  14.7  I   1.9  I   0.4  I   7.3  I   1.2  I
                -I--------I--------I--------I--------I--------I
             3.  I   206  I    25  I     5  I   151  I    19  I   406
  SOMEWHAT UNFAVOR I  50.7  I   6.2  I   1.2  I  37.2  I   4.7  I   5.3
                 I   4.7  I   3.8  I   3.3  I   7.6  I   3.7  I
                 I   2.7  I   0.3  I   0.1  I   2.0  I   0.2  I
                -I--------I--------I--------I--------I--------I
             4.  I    92  I     5  I     0  I    77  I     3  I   177
  VERY    UNFAVORA I  52.0  I   2.8  I   0.0  I  43.5  I   1.7  I   2.3
                 I   2.1  I   0.8  I   0.0  I   3.9  I   0.6  I
                 I   1.2  I   0.1  I   0.0  I   1.0  I   0.0  I
                -I--------I--------I--------I--------I--------I
         COLUMN     4408      655      153     1983      520     7719
          TOTAL     57.1      8.5      2.0     25.7      6.7    100.0

   1 OUT OF    20 (  5.0%) OF THE VALID CELLS HAVE EXPECTED CELL FREQUENCY LESS THAN 5.0.
MINIMUM EXPECTED CELL FREQUENCY =   3.508
CHI SQUARE =    121.29240 WITH  12 DEGREES OF FREEDOM   SIGNIFICANCE =  0.0000
PEARSON'S R = 0.03602  SIGNIFICANCE =  0.0008

NUMBER OF MISSING OBSERVATIONS =      375
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CLR USER QUESTIONNAIRE: LIBRARY TYPE COMPARISON XTABS                                08/05/82        PAGE   30

FILE   FINAL    (CREATION DATE = 08/03/82)

* * * * * * * * * * * * * * * * * * * *  C R O S S T A B U L A T I O N   O F  * * * * * * * * * * * * * * * * * * *
   RQ10      COMPUTER CAT COMPARED TO OTHER CAT              BY  LIBTYPE   LIBRARY GROUPING BY TYPE OF LIBRARY
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *  PAGE  1 OF  1

                     LIBTYPE
            COUNT  I
           ROW PCT IA.R.L. L OTHER AC COMMUNIT PUBLIC    STATE AN   ROW
           COL PCT IIBS      ADEMIC   Y COLLEG           D FEDERA  TOTAL
           TOT PCT I      1.I      2.I      3.I      4.I      5.I
RQ10       --------I--------I--------I--------I--------I--------I
               1.  I  3032  I   502  I   133  I  1247  I   391  I  5305
  BETTER           I  57.2  I   9.5  I   2.5  I  23.5  I   7.4  I  74.5
                   I  74.0  I  81.6  I  91.1  I  69.5  I  84.1  I
                   I  42.6  I   7.1  I   1.9  I  17.5  I   5.5  I
                  -I--------I--------I--------I--------I--------I
               2.  I   702  I    95  I    11  I   315  I    54  I  1177
  EQUAL            I  59.6  I   8.1  I   0.9  I  26.8  I   4.6  I  16.5
                   I  17.1  I  15.4  I   7.5  I  17.5  I  11.6  I
                   I   9.9  I   1.3  I   0.2  I   4.4  I   0.8  I
                  -I--------I--------I--------I--------I--------I
               3.  I   365  I    18  I     2  I   233  I    20  I   638
  WORSE            I  57.2  I   2.8  I   0.3  I  36.5  I   3.1  I   9.0
                   I   8.9  I   2.9  I   1.4  I  13.0  I   4.3  I
                   I   5.1  I   0.3  I   0.0  I   3.3  I   0.3  I
                  -I--------I--------I--------I--------I--------I
           COLUMN     4099      615      146     1795      465     7120
            TOTAL     57.6      8.6      2.1     25.2      6.5    100.0

CHI SQUARE =    115.99091 WITH   8 DEGREES OF FREEDOM   SIGNIFICANCE =  0.0000
PEARSON'S R = 0.01070  SIGNIFICANCE =  0.1833

NUMBER OF MISSING OBSERVATIONS =      974
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CLR USER QUESTIONNAIRE: LIBRARY TYPE COMPARISON XTABS                              08/05/82        PAGE   32

FILE   FINAL    (CREATION DATE = 08/03/82)

* * * * * * * * * * * * * * * * * * * *   C R O S S T A B U L A T I O N   O F   * * * * * * * * * * * * * * * * * * * *
   RQ11       SEARCH BY TITLE IS DIFFICULT                         BY  LIBTYPE   LIBRARY GROUPING BY TYPE OF LIBRARY
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *  PAGE  1 OF  1

                    LIBTYPE
           COUNT   I
           ROW PCT IA.R.L. L OTHER AC COMMUNIT PUBLIC    STATE AN  ROW
           COL PCT IIBS      ADEMIC   Y COLLEG          D FEDERA  TOTAL
           TOT PCT I      1.I      2.I      3.I      4.I      5.I
RQ11       --------I--------I--------I--------I--------I--------I
               -2. I  1442  I   187  I    42  I   470  I   150  I  2291
  STRONGLY DISAGRE I  62.9  I   8.2  I   1.8  I  20.5  I   6.5  I  32.6
                   I  35.0  I  31.0  I  31.8  I  26.6  I  36.1  I
                   I  20.5  I   2.7  I   0.6  I   6.7  I   2.1  I
                  -I--------I--------I--------I--------I--------I
               -1. I  1661  I   279  I    62  I   794  I   156  I  2952
  DISAGREE         I  56.3  I   9.5  I   2.1  I  26.9  I   5.3  I  42.0
                   I  40.4  I  46.3  I  47.0  I  44.9  I  37.6  I
                   I  23.6  I   4.0  I   0.9  I  11.3  I   2.2  I
                  -I--------I--------I--------I--------I--------I
                0. I   494  I    77  I    17  I   250  I    51  I   889
  NEITHER A OR D   I  55.6  I   8.7  I   1.9  I  28.1  I   5.7  I  12.6
                   I  12.0  I  12.8  I  12.9  I  14.1  I  12.3  I
                   I   7.0  I   1.1  I   0.2  I   3.6  I   0.7  I
                  -I--------I--------I--------I--------I--------I
                1. I   405  I    49  I    10  I   191  I    42  I   697
  AGREE            I  58.1  I   7.0  I   1.4  I  27.4  I   6.0  I   9.9
                   I   9.8  I   8.1  I   7.6  I  10.8  I  10.1  I
                   I   5.8  I   0.7  I   0.1  I   2.7  I   0.6  I
                  -I--------I--------I--------I--------I--------I
                2. I   113  I    11  I     1  I    64  I    16  I   205
  STRONGLY AGREE   I  55.1  I   5.4  I   0.5  I  31.2  I   7.8  I   2.9
                   I   2.7  I   1.8  I   0.8  I   3.6  I   3.9  I
                   I   1.6  I   0.2  I   0.0  I   0.9  I   0.2  I
                  -I--------I--------I--------I--------I--------I
            COLUMN    4115      603      132     1769      415     7034
             TOTAL    58.5      8.6      1.9     25.1      5.9    100.0

    1 OUT OF    25 (  4.0%) OF THE VALID CELLS HAVE EXPECTED CELL FREQUENCY LESS THAN 5.0.
MINIMUM EXPECTED CELL FREQUENCY =  3.847
CHI SQUARE =     58.65092 WITH  16 DEGREES OF FREEDOM   SIGNIFICANCE =  0.0000
PEARSON'S R = 0.04964  SIGNIFICANCE =  0.0000

NUMBER OF MISSING OBSERVATIONS =     1060
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CLR USER QUESTIONNAIRE: LIBRARY TYPE COMPARISON XTABS                                  08/05/82        PAGE   33

FILE   FINAL    (CREATION DATE = 08/03/82)

* * * * * * * * * * * * * * * * * *   C R O S S T A B U L A T I O N   O F   * * * * * * * * * * * * * * * * * *
   RQ12      SEARCH BY AUTHOR IS EASY                           BY  LIBTYPE   LIBRARY GROUPING BY TYPE OF LIBRARY
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *  PAGE  1 OF  1

                         LIBTYPE
                 COUNT  I
               ROW PCT  IA.R.L. L OTHER AC COMMUNIT PUBLIC    STATE AN   ROW
               COL PCT  IIBS      ADEMIC   Y COLLEG           D FEDERA  TOTAL
               TOT PCT  I      1.I      2.I      3.I      4.I      5.I
RQ12           --------I--------I--------I--------I--------I--------I
                   -2.  I   106  I    15  I     4  I    58  I     9  I    192
  STRONGLY DISAGRE      I  55.2  I   7.8  I   2.1  I  30.2  I   4.7  I    2.7
                        I   2.5  I   2.5  I   2.9  I   3.3  I   2.2  I
                        I   1.5  I   0.2  I   0.1  I   0.8  I   0.1  I
                       -I--------I--------I--------I--------I--------I
                   -1.  I   287  I    36  I     7  I   134  I    15  I    479
  DISAGREE              I  59.9  I   7.5  I   1.5  I  28.0  I   3.1  I    6.8
                        I   6.9  I   5.9  I   5.0  I   7.6  I   3.6  I
                        I   4.0  I   0.5  I   0.1  I   1.9  I   0.2  I
                       -I--------I--------I--------I--------I--------I
                    0.  I   389  I    50  I    16  I   178  I    48  I    681
  NEITHER A OR D        I  57.1  I   7.3  I   2.3  I  26.1  I   7.0  I    9.6
                        I   9.4  I   8.3  I  11.4  I  10.1  I  11.6  I
                        I   5.5  I   0.7  I   0.2  I   2.5  I   0.7  I
                       -I--------I--------I--------I--------I--------I
                    1.  I  1948  I   314  I    68  I   874  I   190  I   3394
  AGREE                 I  57.4  I   9.3  I   2.0  I  25.8  I   5.6  I   47.9
                        I  46.9  I  51.8  I  48.6  I  49.4  I  46.0  I
                        I  27.5  I   4.4  I   1.0  I  12.3  I   2.7  I
                       -I--------I--------I--------I--------I--------I
                    2.  I  1427  I   191  I    45  I   527  I   151  I   2341
  STRONGLY AGREE        I  61.0  I   8.2  I   1.9  I  22.5  I   6.5  I   33.0
                        I  34.3  I  31.5  I  32.1  I  29.8  I  36.6  I
                        I  20.1  I   2.7  I   0.6  I   7.4  I   2.1  I
                       -I--------I--------I--------I--------I--------I
                COLUMN     4157      606      140     1771      413     7087
                 TOTAL     58.7      8.6      2.0     25.0      5.8    100.0

    1 OUT OF    25 (  4.0%) OF THE VALID CELLS HAVE EXPECTED CELL FREQUENCY LESS THAN 5.0.
MINIMUM EXPECTED CELL FREQUENCY =  3.793
CHI SQUARE =    29.97052 WITH  16 DEGREES OF FREEDOM   SIGNIFICANCE =  0.0182
PEARSON'S R =-0.02045  SIGNIFICANCE =  0.0426

NUMBER OF MISSING OBSERVATIONS =    1007
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CLR USER QUESTIONNAIRE: LIBRARY TYPE COMPARISON XTABS                    08/05/82        PAGE   34

FILE   FINAL    (CREATION DATE = 08/03/82)

* * * * * * * * * * * * * * * * * * *   C R O S S T A B U L A T I O N   O F   * * * * * * * * * * * * * * * * * * *
   RQ13      SEARCH BY SUBJECT IS DIFFICULT               BY  LIBTYPE   LIBRARY GROUPING BY TYPE OF LIBRARY
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *  PAGE  1 OF  1

                     LIBTYPE
             COUNT  I
           ROW PCT  IA.R.L. L OTHER AC COMMUNIT PUBLIC    STATE AN   ROW
           COL PCT  IIBS      ADEMIC   Y COLLEG           D FEDERA   TOTAL
           TOT PCT  I     1.I      2.I      3.I      4.I      5.I
RQ13       --------I--------I--------I--------I--------I--------I
               -2.  I   823  I   115  I    47  I   373  I   103  I   1461
  STRONGLY DISAGRE  I  56.3  I   7.9  I   3.2  I  25.5  I   7.0  I   21.3
                    I  20.6  I  26.7  I  34.3  I  20.5  I  22.0  I
                    I  12.0  I   1.7  I   0.7  I   5.4  I   1.5  I
                   -I--------I--------I--------I--------I--------I
               -1.  I  1222  I   183  I    52  I   633  I   167  I   2257
  DISAGREE          I  54.1  I   8.1  I   2.3  I  28.0  I   7.4  I   32.9
                    I  30.5  I  42.5  I  38.0  I  34.8  I  35.6  I
                    I  17.8  I   2.7  I   0.8  I   9.2  I   2.4  I
                   -I--------I--------I--------I--------I--------I
                0.  I   615  I    50  I    18  I   251  I    78  I   1012
  NEITHER A OR D    I  60.8  I   4.9  I   1.8  I  24.8  I   7.7  I   14.8
                    I  15.4  I  11.6  I  13.1  I  13.8  I  16.6  I
                    I   9.0  I   0.7  I   0.3  I   3.7  I   1.1  I
                   -I--------I--------I--------I--------I--------I
                1.  I   998  I    72  I    19  I   376  I    89  I   1554
  AGREE             I  64.2  I   4.6  I   1.2  I  24.2  I   5.7  I   22.7
                    I  24.9  I  16.7  I  13.9  I  20.7  I  19.0  I
                    I  14.5  I   1.0  I   0.3  I   5.5  I   1.3  I
                   -I--------I--------I--------I--------I--------I
                2.  I   345  I    11  I     1  I   187  I    32  I    576
  STRONGLY AGREE    I  59.9  I   1.9  I   0.2  I  32.5  I   5.6  I    8.4
                    I   8.6  I   2.6  I   0.7  I  10.3  I   6.8  I
                    I   5.0  I   0.2  I   0.0  I   2.7  I   0.5  I
                   -I--------I--------I--------I--------I--------I
            COLUMN     4003      431      137     1820      469     6860
             TOTAL     58.4      6.3      2.0     26.5      6.8    100.0

CHI SQUARE =    110.67963 WITH  16 DEGREES OF FREEDOM   SIGNIFICANCE =  0.0000
PEARSON'S R =-0.03345  SIGNIFICANCE =  0.0028

NUMBER OF MISSING OBSERVATIONS =     1234
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CLR USER QUESTIONNAIRE: LIBRARY TYPE COMPARISON XTABS                              08/05/82        PAGE   35

FILE   FINAL    (CREATION DATE = 08/03/82)

* * * * * * * * * * * * * * * * * * *   C R O S S T A B U L A T I O N   O F   * * * * * * * * * * * * * * * * * * * * * *
   RQ14      SEARCH BY CALL NUMBER IS EASY                      BY  LIBTYPE   LIBRARY GROUPING BY TYPE OF LIBRARY
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *  PAGE  1 OF  1

                         LIBTYPE
                COUNT  I
              ROW PCT  IA.R.L. L OTHER AC COMMUNIT PUBLIC     STATE AN   ROW
              COL PCT  IIBS      ADEMIC   Y COLLEG            D FEDERA   TOTAL
              TOT PCT  I      1.I      2.I      3.I      4.I      5.I
RQ14          --------I--------I--------I--------I--------I--------I
                  -2.  I   105  I    10  I     5  I    62  I    17  I    199
  STRONGLY DISAGRE     I  52.8  I   5.0  I   2.5  I  31.2  I   8.5  I    5.3
                       I   4.5  I  14.1  I   6.2  I   5.9  I   7.2  I
                       I   2.8  I   0.3  I   0.1  I   1.6  I   0.4  I
                      -I--------I--------I--------I--------I--------I
                  -1.  I   194  I     6  I     8  I   142  I    19  I    369
  DISAGREE             I  52.6  I   1.6  I   2.2  I  38.5  I   5.1  I    9.7
                       I   8.3  I   8.5  I   9.9  I  13.5  I   8.1  I
                       I   5.1  I   0.2  I   0.2  I   3.7  I   0.5  I
                      -I--------I--------I--------I--------I--------I
                   0.  I   499  I    29  I    39  I   320  I    69  I    956
  NEITHER A OR D       I  52.2  I   3.0  I   4.1  I  33.5  I   7.2  I   25.2
                       I  21.3  I  40.8  I  48.1  I  30.4  I  29.4  I
                       I  13.2  I   0.8  I   1.0  I   8.4  I   1.8  I
                      -I--------I--------I--------I--------I--------I
                   1.  I   839  I    19  I    15  I   337  I    77  I   1287
  AGREE                I  65.2  I   1.5  I   1.2  I  26.2  I   6.0  I   34.0
                       I  35.7  I  26.8  I  18.5  I  32.0  I  32.8  I
                       I  22.1  I   0.5  I   0.4  I   8.9  I   2.0  I
                      -I--------I--------I--------I--------I--------I
                   2.  I   711  I     7  I    14  I   192  I    53  I    977
  STRONGLY AGREE       I  72.8  I   0.7  I   1.4  I  19.7  I   5.4  I   25.8
                       I  30.3  I   9.9  I  17.3  I  18.2  I  22.6  I
                       I  18.8  I   0.2  I   0.4  I   5.1  I   1.4  I
                      -I--------I--------I--------I--------I--------I
               COLUMN     2348       71       81     1053      235     3788
                TOTAL     62.0      1.9      2.1     27.8      6.2    100.0

    2 OUT OF     25 (  8.0%) OF THE VALID CELLS HAVE EXPECTED CELL FREQUENCY LESS THAN 5.0.
MINIMUM EXPECTED CELL FREQUENCY =   3.730
CHI SQUARE =    150.41559 WITH  16 DEGREES OF FREEDOM    SIGNIFICANCE =  0.0
PEARSON'S R =-0.13829  SIGNIFICANCE =  0.0000

NUMBER OF MISSING OBSERVATIONS =     4306
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FILE   FINAL    (CREATION DATE = 08/03/82)

* * * * * * * * * * * * * * * * * * * *  C R O S S T A B U L A T I O N   O F  * * * * * * * * * * * * * * * * * * *
   RQ15     SEARCH BY AUTHOR-TITLE IS DIFFICULT          BY  LIBTYPE   LIBRARY GROUPING BY TYPE OF LIBRARY
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * PAGE  1 OF  1

                    LIBTYPE
            COUNT  I
          ROW PCT  IA.R.L. L OTHER AC COMMUNIT PUBLIC    STATE AN   ROW
          COL PCT  IIBS      ADEMIC   Y COLLEG           D FEDERA   TOTAL
          TOT PCT  I      1.I      2.I      3.I      4.I      5.I
RQ15      --------I--------I--------I--------I--------I--------I
              -2.  I  1142  I   142  I    22  I   166  I    93  I   1565
  STRONGLY DISAGRE I  73.0  I   9.1  I   1.4  I  10.6  I   5.9  I   32.3
                   I  35.7  I  30.7  I  20.4  I  22.1  I  28.7  I
                   I  23.6  I   2.9  I   0.5  I   3.4  I   1.9  I
                  -I--------I--------I--------I--------I--------I
              -1.  I  1117  I   158  I    32  I   327  I   118  I   1752
  DISAGREE         I  63.8  I   9.0  I   1.8  I  18.7  I   6.7  I   36.2
                   I  34.9  I  34.1  I  29.6  I  43.5  I  36.4  I
                   I  23.0  I   3.3  I   0.7  I   6.7  I   2.4  I
                  -I--------I--------I--------I--------I--------I
               0.  I   564  I   108  I    42  I   150  I    71  I    935
  NEITHER A OR D   I  60.3  I  11.6  I   4.5  I  16.0  I   7.6  I   19.3
                   I  17.6  I  23.3  I  38.9  I  20.0  I  21.9  I
                   I  11.6  I   2.2  I   0.9  I   3.1  I   1.5  I
                  -I--------I--------I--------I--------I--------I
               1.  I   282  I    43  I     8  I    83  I    26  I    442
  AGREE            I  63.8  I   9.7  I   1.8  I  18.8  I   5.9  I    9.1
                   I   8.8  I   9.3  I   7.4  I  11.1  I   8.0  I
                   I   5.8  I   0.9  I   0.2  I   1.7  I   0.5  I
                  -I--------I--------I--------I--------I--------I
               2.  I    95  I    12  I     4  I    25  I    16  I    152
  STRONGLY AGREE   I  62.5  I   7.9  I   2.6  I  16.4  I  10.5  I    3.1
                   I   3.0  I   2.6  I   3.7  I   3.3  I   4.9  I
                   I   2.0  I   0.2  I   0.1  I   0.5  I   0.3  I
                  -I--------I--------I--------I--------I--------I
            COLUMN     3200      463      108      751      324     4846
             TOTAL     66.0      9.6      2.2     15.5      6.7    100.0

    1 OUT OF    25 (  4.0%) OF THE VALID CELLS HAVE EXPECTED CELL FREQUENCY LESS THAN 5.0.
 MINIMUM EXPECTED CELL FREQUENCY =   3.388
 CHI SQUARE =     96.32101 WITH  16 DEGREES OF FREEDOM   SIGNIFICANCE =  0.0000
 PEARSON'S R = 0.07753  SIGNIFICANCE =  0.0000

 NUMBER OF MISSING OBSERVATIONS =     3248
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CLR USER QUESTIONNAIRE: LIBRARY TYPE COMPARISON XTABS                                       08/05/82        PAGE   37

FILE   FINAL    (CREATION DATE = 08/03/82)

* * * * * * * * * * * * * * * * *  C R O S S T A B U L A T I O N   O F  * * * * * * * * * * * * * * * * * * * *
    RQ16      REMBERING COMMANDS EASY                           BY  LIBTYPE   LIBRARY GROUPING BY TYPE OF LIBRARY
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *  PAGE  1 OF   1

                 LIBTYPE
          COUNT  I
        ROW PCT  IA.R.L. L OTHER AC COMMUNIT PUBLIC    STATE AN   ROW
        COL PCT  IIBS      ADEMIC   Y COLLEG           D FEDERA  TOTAL
        TOT PCT  I       1.I      2.I      3.I      4.I      5.I
RQ16    --------I--------I--------I--------I--------I--------I
            -2.  I   165  I    20  I     4  I    50  I    20  I    259
  STRONGLY DISAGRE I  63.7  I   7.7  I   1.5  I  19.3  I   7.7  I    3.6
                 I   4.0  I   3.2  I   2.8  I   2.8  I   4.1  I
                 I   2.3  I   0.3  I   0.1  I   0.7  I   0.3  I
                -I--------I--------I--------I--------I--------I
            -1.  I   682  I   108  I    17  I   255  I   129  I   1191
  DISAGREE       I  57.3  I   9.1  I   1.4  I  21.4  I  10.8  I   16.8
                 I  16.7  I  17.2  I  12.0  I  14.5  I  26.3  I
                 I   9.6  I   1.5  I   0.2  I   3.6  I   1.8  I
                -I--------I--------I--------I--------I--------I
             0.  I   736  I   123  I    29  I   320  I    93  I   1301
  NEITHER A OR D I  56.6  I   9.5  I   2.2  I  24.6  I   7.1  I   18.3
                 I  18.0  I  19.6  I  20.4  I  18.2  I  19.0  I
                 I  10.4  I   1.7  I   0.4  I   4.5  I   1.3  I
                -I--------I--------I--------I--------I--------I
             1.  I  1793  I   289  I    60  I   781  I   189  I   3112
  AGREE          I  57.6  I   9.3  I   1.9  I  25.1  I   6.1  I   43.8
                 I  43.9  I  46.1  I  42.3  I  44.3  I  38.6  I
                 I  25.3  I   4.1  I   0.8  I  11.0  I   2.7  I
                -I--------I--------I--------I--------I--------I
             2.  I   704  I    87  I    32  I   355  I    59  I   1237
  STRONGLY AGREE I  56.9  I   7.0  I   2.6  I  28.7  I   4.8  I   17.4
                 I  17.3  I  13.9  I  22.5  I  20.2  I  12.0  I
                 I   9.9  I   1.2  I   0.5  I   5.0  I   0.8  I
                -I--------I--------I--------I--------I--------I
         COLUMN     4080      627      142     1761      490     7100
          TOTAL     57.5      8.8      2.0     24.8      6.9    100.0

CHI SQUARE =     67.70325 WITH  16 DEGREES OF FREEDOM   SIGNIFICANCE =  0.0000
PEARSON'S R = 0.00182  SIGNIFICANCE =  0.4392

NUMBER OF MISSING OBSERVATIONS =      994
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CLR USER QUESTIONNAIRE: LIBRARY TYPE COMPARISON XTABS                                     08/05/82         PAGE   38

FILE   FINAL    (CREATION DATE = 08/03/82)

* * * * * * * * * * * * * * * * * * * * *   C R O S S T A B U L A T I O N   O F   * * * * * * * * * * * * * * * * * * * *
   RQ17     FINDING CORRECT SUBJECT TERM DIFFICULT       BY  LIBTYPE   LIBRARY GROUPING BY TYPE OF LIBRARY
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * PAGE  1 OF  1

                   LIBTYPE
           COUNT  I
         ROW PCT  IA.R.L. L OTHER AC COMMUNIT PUBLIC    STATE AN  ROW
         COL PCT  IIBS      ADEMIC   Y COLLEG           D FEDERA  TOTAL
         TOT PCT  I      1.I      2.I      3.I      4.I      5.I
RQ17     --------+--------+--------+--------+--------+--------I
             -2.  I   295  I    36  I    17  I   170  I    55  I    573
  STRONGLY DISAGRE I  51.5  I   6.3  I   3.0  I  29.7  I   9.6  I    8.5
                  I   7.4  I   8.4  I  12.2  I   9.5  I  11.8  I
                  I   4.4  I   0.5  I   0.3  I   2.5  I   0.8  I
                 -+--------+--------+--------+--------+--------I
             -1.  I  1052  I   161  I    42  I   574  I   165  I   1994
  DISAGREE        I  52.8  I   8.1  I   2.1  I  28.8  I   8.3  I   29.4
                  I  26.6  I  37.4  I  30.2  I  32.2  I  35.4  I
                  I  15.5  I   2.4  I   0.6  I   8.5  I   2.4  I
                 -+--------+--------+--------+--------+--------I
              0.  I   786  I    71  I    35  I   328  I    88  I   1308
  NEITHER A OR D  I  60.1  I   5.4  I   2.7  I  25.1  I   6.7  I   19.3
                  I  19.8  I  16.5  I  25.2  I  18.4  I  18.9  I
                  I  11.6  I   1.0  I   0.5  I   4.8  I   1.3  I
                 -+--------+--------+--------+--------+--------I
              1.  I  1341  I   138  I    38  I   508  I   123  I   2148
  AGREE           I  62.4  I   6.4  I   1.8  I  23.6  I   5.7  I   31.7
                  I  33.9  I  32.1  I  27.3  I  28.5  I  26.4  I
                  I  19.8  I   2.0  I   0.6  I   7.5  I   1.8  I
                 -+--------+--------+--------+--------+--------I
              2.  I   487  I    24  I     7  I   203  I    35  I    756
  STRONGLY AGREE  I  64.4  I   3.2  I   0.9  I  26.9  I   4.6  I   11.2
                  I  12.3  I   5.6  I   5.0  I  11.4  I   7.5  I
                  I   7.2  I   0.4  I   0.1  I   3.0  I   0.5  I
                 -+--------+--------+--------+--------+--------I
          COLUMN     3961      430      139     1783      466     6779
           TOTAL     58.4      6.3      2.1     26.3      6.9    100.0

CHI SQUARE =     95.65399 WITH  16 DEGREES OF FREEDOM   SIGNIFICANCE =  0.0000
PEARSON'S R =-0.08604  SIGNIFICANCE =  0.0000

NUMBER OF MISSING OBSERVATIONS =     1315
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CLR USER QUESTIONNAIRE: LIBRARY TYPE COMPARISON XTABS                              08/05/82        PAGE   39

FILE   FINAL    (CREATION DATE = 08/03/82)

* * * * * * * * * * * * * * * * * * * * *   C R O S S T A B U L A T I O N   O F   * * * * * * * * * * * * * * * * * *
   RQ18      SCANNING THROUGH  LONG DISPLAY EASY         BY  LIBTYPE   LIBRARY GROUPING BY TYPE OF LIBRARY
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *  PAGE  1 OF  1

                   LIBTYPE
           COUNT  I
         ROW PCT  IA.R.L. L OTHER AC COMMUNIT PUBLIC    STATE AN   ROW
         COL PCT  IIBS      ADEMIC   Y COLLEG           D FEDERA  TOTAL
         TOT PCT  I      1.I      2.I      3.I      4.I      5.I
RQ18     --------I--------I--------I--------I--------I--------I
             -2.  I   263  I    28  I     5  I    98  I    36  I   430
  STRONGLY DISAGRE I  61.2  I   6.5  I   1.2  I  22.8  I   8.4  I   6.2
                  I   6.5  I   4.9  I   3.8  I   5.6  I   7.7  I
                  I   3.8  I   0.4  I   0.1  I   1.4  I   0.5  I
                 -I--------I--------I--------I--------I--------I
             -1.  I   910  I   132  I    15  I   344  I   143  I  1544
  DISAGREE        I  58.9  I   8.5  I   1.0  I  22.3  I   9.3  I  22.2
                  I  22.6  I  23.0  I  11.3  I  19.5  I  30.7  I
                  I  13.1  I   1.9  I   0.2  I   4.9  I   2.1  I
                 -I--------I--------I--------I--------I--------I
              0.  I   792  I   114  I    28  I   298  I    85  I  1317
  NEITHER A OR D  I  60.1  I   8.7  I   2.1  I  22.6  I   6.5  I  18.9
                  I  19.6  I  19.9  I  21.1  I  16.9  I  18.2  I
                  I  11.4  I   1.6  I   0.4  I   4.3  I   1.2  I
                 -I--------I--------I--------I--------I--------I
              1.  I  1605  I   252  I    65  I   767  I   161  I  2850
  AGREE           I  56.3  I   8.8  I   2.3  I  26.9  I   5.6  I  40.9
                  I  39.8  I  43.9  I  48.9  I  43.6  I  34.5  I
                  I  23.0  I   3.6  I   0.9  I  11.0  I   2.3  I
                 -I--------I--------I--------I--------I--------I
              2.  I   461  I    48  I    20  I   253  I    41  I   823
  STRONGLY AGREE  I  56.0  I   5.8  I   2.4  I  30.7  I   5.0  I  11.8
                  I  11.4  I   8.4  I  15.0  I  14.4  I   8.8  I
                  I   6.6  I   0.7  I   0.3  I   3.6  I   0.6  I
                 -I--------I--------I--------I--------I--------I
          COLUMN     4031      574      133     1760      466     6964
           TOTAL     57.9      8.2      1.9     25.3      6.7    100.0

CHI SQUARE =     73.25720 WITH  16 DEGREES OF FREEDOM   SIGNIFICANCE =  0.0000
PEARSON'S R = 0.02010  SIGNIFICANCE =  0.0467

NUMBER OF MISSING OBSERVATIONS =     1130
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CLR USER QUESTIONNAIRE: LIBRARY TYPE COMPARISON XTABS                          08/05/82        PAGE   40

FILE   FINAL    (CREATION DATE = 08/03/82)

* * * * * * * * * * * * * * * * * * *   C R O S S T A B U L A T I O N   O F   * * * * * * * * * * * * * * * * * * *
    RQ19      INCREASING THE RESULT DIFF                         BY  LIBTYPE   LIBRARY GROUPING BY TYPE OF LIBRARY
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * PAGE  1 OF  1

                  LIBTYPE
           COUNT  I
         ROW PCT  IA.R.L. L OTHER AC COMMUNIT PUBLIC    STATE AN   ROW
         COL PCT  IIBS      ADEMIC   Y COLLEG           D FEDERA   TOTAL
         TOT PCT  I       1.I      2.I      3.I      4.I      5.I
RQ19     --------I--------I--------I--------I--------I--------I
             -2.  I    86  I    25  I     7  I    20  I    19  I    157
  STRONGLY DISAGRE I  54.8  I  15.9  I   4.5  I  12.7  I  12.1  I    5.7
                  I   6.0  I   6.9  I   5.9  I   4.6  I   4.9  I
                  I   3.1  I   0.9  I   0.3  I   0.7  I   0.7  I
                 -I--------I--------I--------I--------I--------I
             -1.  I   255  I    68  I    35  I    93  I    93  I    544
  DISAGREE        I  46.9  I  12.5  I   6.4  I  17.1  I  17.1  I   19.9
                  I  17.8  I  18.7  I  29.4  I  21.2  I  24.2  I
                  I   9.3  I   2.5  I   1.3  I   3.4  I   3.4  I
                 -I--------I--------I--------I--------I--------I
              0.  I   384  I   127  I    44  I   115  I   107  I    777
  NEITHER A OR D  I  49.4  I  16.3  I   5.7  I  14.8  I  13.8  I   28.4
                  I  26.8  I  34.9  I  37.0  I  26.3  I  27.9  I
                  I  14.0  I   4.6  I   1.6  I   4.2  I   3.9  I
                 -I--------I--------I--------I--------I--------I
              1.  I   571  I   123  I    28  I   165  I   140  I   1027
  AGREE           I  55.6  I  12.0  I   2.7  I  16.1  I  13.6  I   37.5
                  I  39.8  I  33.8  I  23.5  I  37.7  I  36.5  I
                  I  20.9  I   4.5  I   1.0  I   6.0  I   5.1  I
                 -I--------I--------I--------I--------I--------I
              2.  I   137  I    21  I     5  I    45  I    25  I    233
  STRONGLY AGREE  I  58.8  I   9.0  I   2.1  I  19.3  I  10.7  I    8.5
                  I   9.6  I   5.8  I   4.2  I  10.3  I   6.5  I
                  I   5.0  I   0.8  I   0.2  I   1.6  I   0.9  I
                 -I--------I--------I--------I--------I--------I
          COLUMN     1433      364      119      438      384     2738
           TOTAL     52.3     13.3      4.3     16.0     14.0    100.0

CHI SQUARE =     46.68639 WITH  16 DEGREES OF FREEDOM   SIGNIFICANCE =  0.0001
PEARSON'S R =-0.03920  SIGNIFICANCE =  0.0201

NUMBER OF MISSING OBSERVATIONS =     5356
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CLR USER QUESTIONNAIRE: LIBRARY TYPE COMPARISON XTABS                        08/05/82        PAGE   41

FILE   FINAL    (CREATION DATE = 08/03/82)

* * * * * * * * * * * * * * * * * * * *  C R O S S T A B U L A T I O N   O F  * * * * * * * * * * * * * * * * * * *
   RQ20      REDUCING THE RESULT EASY                              BY  LIBTYPE   LIBRARY GROUPING BY TYPE OF LIBRARY
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *  PAGE  1 OF  1

                    LIBTYPE

            COUNT  I
          ROW PCT  IA.R.L. L OTHER AC COMMUNIT PUBLIC    STATE AN  ROW
          COL PCT  IIBS      ADEMIC   Y COLLEG           D FEDERA  TOTAL
          TOT PCT  I       1.I      2.I      3.I      4.I      5.I
RQ20      --------I--------I--------I--------I--------I--------I
              -2.  I   219  I    17  I     8  I    66  I    19  I   329
  STRONGLY DISAGRE I  66.6  I   5.2  I   2.4  I  20.1  I   5.8  I   5.6
                   I   6.2  I   3.4  I   7.0  I   4.7  I   5.0  I
                   I   3.7  I   0.3  I   0.1  I   1.1  I   0.3  I
                  -I--------I--------I--------I--------I--------I
              -1.  I   778  I   106  I     8  I   262  I    91  I  1245
  DISAGREE         I  62.5  I   8.5  I   0.6  I  21.0  I   7.3  I  21.0
                   I  22.0  I  21.4  I   7.0  I  18.8  I  23.8  I
                   I  13.1  I   1.8  I   0.1  I   4.4  I   1.5  I
                  -I--------I--------I--------I--------I--------I
               0.  I  1038  I   150  I    43  I   506  I   110  I  1847
  NEITHER A OR D   I  56.2  I   8.1  I   2.3  I  27.4  I   6.0  I  31.2
                   I  29.3  I  30.2  I  37.4  I  36.3  I  28.8  I
                   I  17.5  I   2.5  I   0.7  I   8.5  I   1.9  I
                  -I--------I--------I--------I--------I--------I
               1.  I  1172  I   185  I    44  I   450  I   132  I  1983
  AGREE            I  59.1  I   9.3  I   2.2  I  22.7  I   6.7  I  33.5
                   I  33.1  I  37.3  I  38.3  I  32.3  I  34.6  I
                   I  19.8  I   3.1  I   0.7  I   7.6  I   2.2  I
                  -I--------I--------I--------I--------I--------I
               2.  I   333  I    38  I    12  I   109  I    30  I   522
  STRONGLY AGREE   I  63.8  I   7.3  I   2.3  I  20.9  I   5.7  I   8.8
                   I   9.4  I   7.7  I  10.4  I   7.8  I   7.9  I
                   I   5.6  I   0.6  I   0.2  I   1.8  I   0.5  I
                  -I--------I--------I--------I--------I--------I
           COLUMN     3540      496      115     1393      382     5926
            TOTAL     59.7      8.4      1.9     23.5      6.4    100.0

CHI SQUARE =     52.23062 WITH  16 DEGREES OF FREEDOM   SIGNIFICANCE =  0.0000
PEARSON'S R = 0.00698  SIGNIFICANCE =  0.2955

NUMBER OF MISSING OBSERVATIONS =     2168
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CLR USER QUESTIONNAIRE: LIBRARY TYPE COMPARISON XTABS                    08/05/82       PAGE   42

FILE   FINAL    (CREATION DATE = 08/03/82)

* * * * * * * * * * * * * * * * *   C R O S S T A B U L A T I O N   O F   * * * * * * * * * * * * * * * * *
   RQ21      UNDERSTAND SCREEN EXPLANATIONS DIFF          BY  LIBTYPE   LIBRARY GROUPING BY TYPE OF LIBRARY
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * PAGE  1 OF  1

                  LIBTYPE
         COUNT   I
        ROW PCT  IA.R.L. L OTHER AC COMMUNIT PUBLIC   STATE AN   ROW
        COL PCT  IIBS      ADEMIC   Y COLLEG          D FEDERA   TOTAL
        TOT PCT  I      1.I      2.I      3.I      4.I      5.I
RQ21    --------I--------I--------I--------I--------I--------I
            -2.  I   1180 I    118 I     56 I    407 I     88 I    1849
  STRONGLY DISAGRE I   63.8 I    6.4 I    3.0 I   22.0 I    4.8 I    25.2
                 I   28.2 I   18.4 I   38.1 I   21.9 I   17.8 I
                 I   16.1 I    1.6 I    0.8 I    5.6 I    1.2 I
                -I--------I--------I--------I--------I--------I
            -1.  I   2069 I    348 I     71 I    934 I    224 I    3646
  DISAGREE       I   56.7 I    9.5 I    1.9 I   25.6 I    6.1 I    49.7
                 I   49.4 I   54.2 I   48.3 I   50.2 I   45.4 I
                 I   28.2 I    4.7 I    1.0 I   12.7 I    3.1 I
                -I--------I--------I--------I--------I--------I
             0.  I    416 I     72 I     14 I    211 I     66 I     779
  NEITHER A OR D I   53.4 I    9.2 I    1.8 I   27.1 I    8.5 I    10.6
                 I    9.9 I   11.2 I    9.5 I   11.4 I   13.4 I
                 I    5.7 I    1.0 I    0.2 I    2.9 I    0.9 I
                -I--------I--------I--------I--------I--------I
             1.  I    398 I     90 I      6 I    244 I     89 I     827
  AGREE          I   48.1 I   10.9 I    0.7 I   29.5 I   10.8 I    11.3
                 I    9.5 I   14.0 I    4.1 I   13.1 I   18.1 I
                 I    5.4 I    1.2 I    0.1 I    3.3 I    1.2 I
                -I--------I--------I--------I--------I--------I
             2.  I    127 I     14 I      0 I     63 I     26 I     230
  STRONGLY AGREE I   55.2 I    6.1 I    0.0 I   27.4 I   11.3 I     3.1
                 I    3.0 I    2.2 I    0.0 I    3.4 I    5.3 I
                 I    1.7 I    0.2 I    0.0 I    0.9 I    0.4 I
                -I--------I--------I--------I--------I--------I
         COLUMN     4190      642      147     1859      493     7331
          TOTAL     57.2      8.8      2.0     25.4      6.7    100.0

     1 OUT OF    25 (  4.0%) OF THE VALID CELLS HAVE EXPECTED CELL FREQUENCY LESS THAN 5.0.
MINIMUM EXPECTED CELL FREQUENCY =   4.612
CHI SQUARE =    128.79872 WITH  16 DEGREES OF FREEDOM   SIGNIFICANCE =  0.0000
PEARSON'S R = 0.09135  SIGNIFICANCE =  0.0000

NUMBER OF MISSING OBSERVATIONS =       763
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CLR USER QUESTIONNAIRE: LIBRARY TYPE COMPARISON XTABS                           08/05/82        PAGE   43

FILE   FINAL    (CREATION DATE = 08/03/82)

* * * * * * * * * * * * * * * * *  C R O S S T A B U L A T I O N   O F  * * * * * * * * * * * * * * * * *
   RQ22      USING CODES OR ABBREVIATIONS EASY              BY  LIBTYPE   LIBRARY GROUPING BY TYPE OF LIBRARY
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *  PAGE  1 OF  1

                   LIBTYPE
           COUNT  I
         ROW PCT  IA.R.L. L OTHER AC COMMUNIT PUBLIC    STATE AN   ROW
         COL PCT  IIBS      ADEMIC   Y COLLEG           D FEDERA  TOTAL
         TOT PCT  I      1.I      2.I      3.I      4.I      5.I
RQ22     --------I--------I--------I--------I--------I--------I
             -2.  I   103  I    14  I     6  I    85  I    15  I    223
  STRONGLY DISAGRE I  46.2  I   6.3  I   2.7  I  38.1  I   6.7  I    3.3
                  I   2.6  I   2.3  I   4.5  I   5.7  I   3.1  I
                  I   1.5  I   0.2  I   0.1  I   1.3  I   0.2  I
                 -I--------I--------I--------I--------I--------I
             -1.  I   470  I    76  I    10  I   310  I    69  I    935
  DISAGREE        I  50.3  I   8.1  I   1.1  I  33.2  I   7.4  I   14.0
                  I  11.8  I  12.3  I   7.6  I  20.9  I  14.4  I
                  I   7.0  I   1.1  I   0.1  I   4.6  I   1.0  I
                 -I--------I--------I--------I--------I--------I
              0.  I   717  I   133  I    27  I   326  I    71  I   1274
  NEITHER A OR D  I  56.3  I  10.4  I   2.1  I  25.6  I   5.6  I   19.0
                  I  18.0  I  21.6  I  20.5  I  22.0  I  14.8  I
                  I  10.7  I   2.0  I   0.4  I   4.9  I   1.1  I
                 -I--------I--------I--------I--------I--------I
              1.  I  2007  I   320  I    61  I   595  I   253  I   3236
  AGREE           I  62.0  I   9.9  I   1.9  I  18.4  I   7.8  I   48.3
                  I  50.4  I  51.9  I  46.2  I  40.1  I  52.8  I
                  I  30.0  I   4.8  I   0.9  I   8.9  I   3.8  I
                 -I--------I--------I--------I--------I--------I
              2.  I   686  I    74  I    28  I   167  I    71  I   1026
  STRONGLY AGREE  I  66.9  I   7.2  I   2.7  I  16.3  I   6.9  I   15.3
                  I  17.2  I  12.0  I  21.2  I  11.3  I  14.8  I
                  I  10.2  I   1.1  I   0.4  I   2.5  I   1.1  I
                 -I--------I--------I--------I--------I--------I
          COLUMN     3983      617      132     1483      479     6694
           TOTAL     59.5      9.2      2.0     22.2      7.2    100.0

    1 OUT OF     25 (  4.0%) OF THE VALID CELLS HAVE EXPECTED CELL FREQUENCY LESS THAN 5.0.
MINIMUM EXPECTED CELL FREQUENCY =   4.397
CHI SQUARE =    181.04729 WITH  16 DEGREES OF FREEDOM    SIGNIFICANCE =  0.0
PEARSON'S R =-0.11525  SIGNIFICANCE =  0.0000

NUMBER OF MISSING OBSERVATIONS =     1400
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CLR USER QUESTIONNAIRE: LIBRARY TYPE COMPARISON XTABS                                    08/05/82        PAGE   44

FILE   FINAL    (CREATION DATE = 08/03/82)

* * * * * * * * * * * * * * * * * * * * *  C R O S S T A B U L A T I O N   O F  * * * * * * * * * * * * * * * * * * * *
   RQ23      UNDERSTANDING CODES OR ABBREV EASY             BY  LIBTYPE   LIBRARY GROUPING BY TYPE OF LIBRARY
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * PAGE  1 OF  1

                     LIBTYPE

              COUNT  I
            ROW PCT  IA.R.L. L OTHER AC COMMUNIT PUBLIC    STATE AN   ROW
            COL PCT  IIBS      ADEMIC   Y COLLES           D FEDERA   TOTAL
            TOT PCT  I      1.I      2.I      3.I      4.I      5.I
RQ23        --------I--------I--------I--------I--------I--------I
                -2.  I   122  I    21  I     3  I    70  I    25  I    241
  STRONGLY DISAGRE   I  50.6  I   8.7  I   1.2  I  29.0  I  10.4  I    3.3
                     I   2.9  I   3.3  I   2.1  I   3.9  I   5.1  I
                     I   1.7  I   0.3  I   0.0  I   1.0  I   0.3  I
                    -I--------I--------I--------I--------I--------I
                -1.  I   484  I    95  I    11  I   315  I    84  I    989
  DISAGREE           I  48.9  I   9.6  I   1.1  I  31.9  I   8.5  I   13.7
                     I  11.7  I  14.9  I   7.7  I  17.4  I  17.3  I
                     I   6.7  I   1.3  I   0.2  I   4.4  I   1.2  I
                    -I--------I--------I--------I--------I--------I
                 0.  I   665  I   122  I    26  I   344  I    85  I   1242
  NEITHER A OR D     I  53.5  I   9.8  I   2.1  I  27.7  I   6.8  I   17.2
                     I  16.1  I  19.2  I  18.3  I  19.0  I  17.5  I
                     I   9.2  I   1.7  I   0.4  I   4.8  I   1.2  I
                    -I--------I--------I--------I--------I--------I
                 1.  I  2196  I   332  I    75  I   867  I   239  I   3709
  AGREE              I  59.2  I   9.0  I   2.0  I  23.4  I   6.4  I   51.4
                     I  53.1  I  52.2  I  52.8  I  47.8  I  49.2  I
                     I  30.4  I   4.6  I   1.0  I  12.0  I   3.3  I
                    -I--------I--------I--------I--------I--------I
                 2.  I   670  I    66  I    27  I   216  I    53  I   1032
  STRONGLY AGREE     I  64.9  I   6.4  I   2.6  I  20.9  I   5.1  I   14.3
                     I  16.2  I  10.4  I  19.0  I  11.9  I  10.9  I
                     I   9.3  I   0.9  I   0.4  I   3.0  I   0.7  I
                    -I--------I--------I--------I--------I--------I
             COLUMN     4137      636      142     1812      486     7213
              TOTAL     57.4      8.8      2.0     25.1      6.7    100.0

     1 OUT OF    25 (  4.0%) OF THE VALID CELLS HAVE EXPECTED CELL FREQUENCY LESS THAN 5.0.
MINIMUM EXPECTED CELL FREQUENCY =  4.744
CHI SQUARE =     93.51187 WITH  16 DEGREES OF FREEDOM   SIGNIFICANCE =  0.0000
PEARSON'S R =-0.09597  SIGNIFICANCE =  0.0000

NUMBER OF MISSING OBSERVATIONS =     881
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CLR USER QUESTIONNAIRE: LIBRARY TYPE COMPARISON XTABS                                08/05/82        PAGE   45

FILE   FINAL    (CREATION DATE = 08/03/82)

* * * * * * * * * * * * * * * * *  C R O S S T A B U L A T I O N   O F  * * * * * * * * * * * * * * * * * * * *
   RQ24      LOCATING CALL NUMBERS DIFFICULT                 BY  LIBTYPE   LIBRARY GROUPING BY TYPE OF LIBRARY
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *  PAGE  1 OF  1

                    LIBTYPE
            COUNT  I
          ROW PCT  IA.R.L. L OTHER AC COMMUNIT PUBLIC    STATE AN  ROW
          COL PCT  IIBS      ADEMIC   Y COLLEG           D FEDERA  TOTAL
          TOT PCT  I      1.I      2.I      3.I      4.I      5.I
RQ24      --------I--------I--------I--------I--------I--------I
              -2.  I  1130  I   116  I    40  I   377  I   100  I  1763
  STRONGLY DISAGRE I  64.1  I   6.6  I   2.3  I  21.4  I   5.7  I  25.5
                   I  28.0  I  20.3  I  29.4  I  21.9  I  22.5  I
                   I  16.4  I   1.7  I   0.6  I   5.5  I   1.4  I
                  -I--------I--------I--------I--------I--------I
              -1.  I  1883  I   302  I    69  I   856  I   202  I  3312
  DISAGREE         I  56.9  I   9.1  I   2.1  I  25.8  I   6.1  I  48.0
                   I  46.7  I  52.9  I  50.7  I  49.7  I  45.4  I
                   I  27.3  I   4.4  I   1.0  I  12.4  I   2.9  I
                  -I--------I--------I--------I--------I--------I
               0.  I   464  I    77  I    19  I   240  I    75  I   875
  NEITHER A OR D   I  53.0  I   8.8  I   2.2  I  27.4  I   8.6  I  12.7
                   I  11.5  I  13.5  I  14.0  I  13.9  I  16.9  I
                   I   6.7  I   1.1  I   0.3  I   3.5  I   1.1  I
                  -I--------I--------I--------I--------I--------I
               1.  I   415  I    61  I     7  I   200  I    53  I   736
  AGREE            I  56.4  I   8.3  I   1.0  I  27.2  I   7.2  I  10.7
                   I  10.3  I  10.7  I   5.1  I  11.6  I  11.9  I
                   I   6.0  I   0.9  I   0.1  I   2.9  I   0.8  I
                  -I--------I--------I--------I--------I--------I
               2.  I   137  I    15  I     1  I    51  I    15  I   219
  STRONGLY AGREE   I  62.6  I   6.8  I   0.5  I  23.3  I   6.8  I   3.2
                   I   3.4  I   2.6  I   0.7  I   3.0  I   3.4  I
                   I   2.0  I   0.2  I   0.0  I   0.7  I   0.2  I
                  -I--------I--------I--------I--------I--------I
           COLUMN     4029      571      136     1724      445     6905
            TOTAL     58.3      8.3      2.0     25.0      6.4    100.0

     1 OUT OF    25 (  4.0%) OF THE VALID CELLS HAVE EXPECTED CELL FREQUENCY LESS THAN 5.0.
MINIMUM EXPECTED CELL FREQUENCY =  4.313
CHI SQUARE =     57.06093 WITH  16 DEGREES OF FREEDOM   SIGNIFICANCE =  0.0000
PEARSON'S R = 0.04500  SIGNIFICANCE =  0.0001

NUMBER OF MISSING OBSERVATIONS =     1189
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CLR USER QUESTIONNAIRE: LIBRARY TYPE COMPARISON XTABS                                08/05/82        PAGE   46

FILE    FINAL     (CREATION DATE = 08/03/82)

* * * * * * * * * * * * * * * * * * * * *   C R O S S T A B U L A T I O N   O F   * * * * * * * * * * * * * * * * * * *
    RQ25      USING TRUNCATION IS EASY                                BY  LIBTYPE   LIBRARY GROUPING BY TYPE OF LIBRARY
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * PAGE  1 OF  1

                     LIBTYPE
             COUNT  I
           ROW PCT  IA.R.L. L OTHER AC COMMUNIT PUBLIC    STATE AN   ROW
           COL PCT  IIBS      ADEMIC   Y COLLEG           D FEDERA   TOTAL
           TOT PCT  I      1.I      2.I      3.I      4.I      5.I
RQ25       --------I--------I--------I--------I--------I--------I
               -2.  I   223  I    18  I     6  I    71  I    15  I    333
  STRONGLY DISAGRE  I  67.0  I   5.4  I   1.8  I  21.3  I   4.5  I    6.0
                    I   6.4  I   3.5  I   5.6  I   6.7  I   4.3  I
                    I   4.0  I   0.3  I   0.1  I   1.3  I   0.3  I
                   -I--------I--------I--------I--------I--------I
               -1.  I   742  I   115  I    23  I   254  I    63  I   1197
  DISAGREE          I  62.0  I   9.6  I   1.9  I  21.2  I   5.3  I   21.7
                    I  21.3  I  22.3  I  21.3  I  23.9  I  18.1  I
                    I  13.4  I   2.1  I   0.4  I   4.6  I   1.1  I
                   -I--------I--------I--------I--------I--------I
                0.  I  1035  I   152  I    31  I   272  I   112  I   1602
  NEITHER A OR D    I  64.6  I   9.5  I   1.9  I  17.0  I   7.0  I   29.0
                    I  29.7  I  29.5  I  28.7  I  25.6  I  32.2  I
                    I  18.7  I   2.8  I   0.6  I   4.9  I   2.0  I
                   -I--------I--------I--------I--------I--------I
                1.  I  1135  I   187  I    35  I   368  I   133  I   1858
  AGREE             I  61.1  I  10.1  I   1.9  I  19.8  I   7.2  I   33.7
                    I  32.6  I  36.2  I  32.4  I  34.6  I  38.2  I
                    I  20.6  I   3.4  I   0.6  I   6.7  I   2.4  I
                   -I--------I--------I--------I--------I--------I
                2.  I   350  I    44  I    13  I    99  I    25  I    531
  STRONGLY AGREE    I  65.9  I   8.3  I   2.4  I  18.6  I   4.7  I    9.6
                    I  10.0  I   8.5  I  12.0  I   9.3  I   7.2  I
                    I   6.3  I   0.8  I   0.2  I   1.8  I   0.5  I
                   -I--------I--------I--------I--------I--------I
            COLUMN     3485      516      108     1064      348     5521
             TOTAL     63.1      9.3      2.0     19.3      6.3    100.0

CHI SQUARE =     28.63750 WITH  16 DEGREES OF FREEDOM   SIGNIFICANCE =  0.0265
PEARSON'S R = 0.00340  SIGNIFICANCE =  0.4004

NUMBER OF MISSING OBSERVATIONS =     2573
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CLR USER QUESTIONNAIRE: LIBRARY TYPE COMPARISON XTABS                               08/05/82        PAGE   47

FILE   FINAL    (CREATION DATE = 08/03/82)

* * * * * * * * * * * * * * * * * * * *  C R O S S T A B U L A T I O N   O F  * * * * * * * * * * * * * * * * * * *
   RQ26      USING BOOLEAN OPERATORS DIFF                     BY  LIBTYPE   LIBRARY GROUPING BY TYPE OF LIBRARY
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *  PAGE  1 OF  1

                    LIBTYPE
             COUNT  I
           ROW PCT  IA.R.L. L OTHER AC STATE AN   ROW
           COL PCT  IIBS      ADEMIC   D FEDERA  TOTAL
           TOT PCT  I      1.I      2.I      5.I
RQ26       --------+--------+--------+--------I
               -2.  I   326  I    36  I    50  I   412
  STRONGLY DISAGRE  I  79.1  I   8.7  I  12.1  I  16.5
                    I  17.8  I  11.4  I  14.0  I
                    I  13.0  I   1.4  I   2.0  I
                   -+--------+--------+--------I
               -1.  I   566  I   136  I   143  I   845
  DISAGREE          I  67.0  I  16.1  I  16.9  I  33.8
                    I  30.9  I  43.0  I  40.2  I
                    I  22.6  I   5.4  I   5.7  I
                   -+--------+--------+--------I
                0.  I   535  I    75  I   108  I   718
  NEITHER A OR D    I  74.5  I  10.4  I  15.0  I  28.7
                    I  29.3  I  23.7  I  30.3  I
                    I  21.4  I   3.0  I   4.3  I
                   -+--------+--------+--------I
                1.  I   284  I    64  I    42  I   390
  AGREE             I  72.8  I  16.4  I  10.8  I  15.6
                    I  15.5  I  20.3  I  11.8  I
                    I  11.4  I   2.6  I   1.7  I
                   -+--------+--------+--------I
                2.  I   118  I     5  I    13  I   136
  STRONGLY AGREE    I  86.8  I   3.7  I   9.6  I   5.4
                    I   6.5  I   1.6  I   3.7  I
                    I   4.7  I   0.2  I   0.5  I
                   -+--------+--------+--------I
            COLUMN     1829      316      356     2501
             TOTAL     73.1     12.6     14.2    100.0

CHI SQUARE =     50.03474 WITH   8 DEGREES OF FREEDOM   SIGNIFICANCE =  0.0000
PEARSON'S R =-0.03503  SIGNIFICANCE =  0.0399

NUMBER OF MISSING OBSERVATIONS =     5593
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CLR USER QUESTIONNAIRE: LIBRARY TYPE COMPARISON XTABS                                     08/05/82        PAGE   48

FILE   FINAL    (CREATION DATE = 08/03/82)

* * * * * * * * * * * * * * * * * *   C R O S S T A B U L A T I O N   O F   * * * * * * * * * * * * * * * * * *
   RQ27      REM ING EXACT SEQ OF COMM EASY                BY  LIBTYPE   LIBRARY GROUPING BY TYPE OF LIBRARY
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *  PAGE  1 OF  1

                  LIBTYPE
         COUNT  I
        ROW PCT IA.R.L. L OTHER AC COMMUNIT PUBLIC    STATE AN  ROW
        COL PCT IIBS      ADEMIC   Y COLLEG           D FEDERA  TOTAL
        TOT PCT I      1.I      2.I      3.I      4.I      5.I
RQ27    --------I--------I--------I--------I--------I--------I
            -2. I    95  I     4  I     3  I    34  I    15  I   151
  STRONGLY DISAGRE I  62.9  I   2.6  I   2.0  I  22.5  I   9.9  I   2.2
                I   2.4  I   0.6  I   2.1  I   1.9  I   3.1  I
                I   1.4  I   0.1  I   0.0  I   0.5  I   0.2  I
               -I--------I--------I--------I--------I--------I
            -1. I   643  I   134  I    15  I   276  I   114  I  1182
  DISAGREE      I  54.4  I  11.3  I   1.3  I  23.4  I   9.6  I  17.1
                I  16.4  I  21.6  I  10.4  I  15.7  I  23.8  I
                I   9.3  I   1.9  I   0.2  I   4.0  I   1.6  I
               -I--------I--------I--------I--------I--------I
             0. I   815  I   141  I    29  I   327  I    91  I  1403
  NEITHER A OR D I  58.1  I  10.0  I   2.1  I  23.3  I   6.5  I  20.3
                I  20.7  I  22.8  I  20.1  I  18.6  I  19.0  I
                I  11.8  I   2.0  I   0.4  I   4.7  I   1.3  I
               -I--------I--------I--------I--------I--------I
             1. I  1903  I   304  I    81  I   896  I   219  I  3403
  AGREE         I  55.9  I   8.9  I   2.4  I  26.3  I   6.4  I  49.1
                I  48.4  I  49.1  I  56.3  I  51.1  I  45.7  I
                I  27.5  I   4.4  I   1.2  I  12.9  I   3.2  I
               -I--------I--------I--------I--------I--------I
             2. I   473  I    36  I    16  I   221  I    40  I   786
  STRONGLY AGREE I  60.2  I   4.6  I   2.0  I  28.1  I   5.1  I  11.4
                I  12.0  I   5.8  I  11.1  I  12.6  I   8.4  I
                I   6.8  I   0.5  I   0.2  I   3.2  I   0.6  I
               -I--------I--------I--------I--------I--------I
         COLUMN     3929      619      144     1754      479    6925
          TOTAL     56.7      8.9      2.1     25.3      6.9   100.0

    1 OUT OF    25 (  4.0%) OF THE VALID CELLS HAVE EXPECTED CELL FREQUENCY LESS THAN 5.0.
MINIMUM EXPECTED CELL FREQUENCY =  3.140
CHI SQUARE =     71.13995 WITH  16 DEGREES OF FREEDOM   SIGNIFICANCE =  0.0000
PEARSON'S R =-0.00558  SIGNIFICANCE =  0.3213

NUMBER OF MISSING OBSERVATIONS =     1169
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CLR USER QUESTIONNAIRE: LIBRARY TYPE COMPARISON XTABS                                    08/05/82        PAGE   49

FILE   FINAL     (CREATION DATE = 08/03/82)

* * * * * * * * * * * * * * * * *  C R O S S T A B U L A T I O N   O F  * * * * * * * * * * * * * * * * * * *
    RQ28      UNDERSTANDING INITIAL SCREEN INSTR DIFF       BY  LIBTYPE   LIBRARY GROUPING BY TYPE OF LIBRARY
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *  PAGE  1 OF  1

                      LIBTYPE
              COUNT  I
            ROW PCT  IA.R.L. L OTHER AC COMMUNIT PUBLIC    STATE AN  ROW
            COL PCT  IIBS      ADEMIC   Y COLLEG           D FEDERA  TOTAL
            TOT PCT  I      1.I      2.I      3.I      4.I      5.I
RQ28        --------+--------+--------+--------+--------+--------I
                -2.  I   528  I    58  I    34  I   310  I    50  I    980
  STRONGLY DISAGRE   I  53.9  I   5.9  I   3.5  I  31.6  I   5.1  I   22.1
                     I  32.8  I  13.5  I  23.9  I  17.3  I  10.6  I
                     I  11.9  I   1.3  I   0.8  I   7.0  I   1.1  I
                    -+--------+--------+--------+--------+--------I
                -1.  I   737  I   277  I    78  I   923  I   236  I   2251
  DISAGREE           I  32.7  I  12.3  I   3.5  I  41.0  I  10.5  I   50.7
                     I  45.8  I  64.4  I  54.9  I  51.6  I  50.2  I
                     I  16.6  I   6.2  I   1.8  I  20.8  I   5.3  I
                    -+--------+--------+--------+--------+--------I
                 0.  I   166  I    44  I    15  I   223  I    84  I    532
  NEITHER A OR D     I  31.2  I   8.3  I   2.8  I  41.9  I  15.8  I   12.0
                     I  10.3  I  10.2  I  10.6  I  12.5  I  17.9  I
                     I   3.7  I   1.0  I   0.3  I   5.0  I   1.9  I
                    -+--------+--------+--------+--------+--------I
                 1.  I   127  I    49  I    12  I   255  I    79  I    522
  AGREE              I  24.3  I   9.4  I   2.3  I  48.9  I  15.1  I   11.8
                     I   7.9  I  11.4  I   8.5  I  14.2  I  16.8  I
                     I   2.9  I   1.1  I   0.3  I   5.7  I   1.8  I
                    -+--------+--------+--------+--------+--------I
                 2.  I    50  I     2  I     3  I    79  I    21  I    155
  STRONGLY AGREE     I  32.3  I   1.3  I   1.9  I  51.0  I  13.5  I    3.5
                     I   3.1  I   0.5  I   2.1  I   4.4  I   4.5  I
                     I   1.1  I   0.0  I   0.1  I   1.8  I   0.5  I
                    -+--------+--------+--------+--------+--------I
             COLUMN     1608      430      142     1790      470      4440
              TOTAL     36.2      9.7      3.2     40.3     10.6     100.0

     1 OUT OF     25 (  4.0%) OF THE VALID CELLS HAVE EXPECTED CELL FREQUENCY LESS THAN 5.0.
MINIMUM EXPECTED CELL FREQUENCY =   4.957
CHI SQUARE =    248.12369 WITH  16 DEGREES OF FREEDOM   SIGNIFICANCE =  0.0
PEARSON'S R = 0.17348  SIGNIFICANCE =  0.0000

NUMBER OF MISSING OBSERVATIONS =     3654
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CLR USER QUESTIONNAIRE: LIBRARY TYPE COMPARISON XTABS                                   08/05/82        PAGE   50

FILE   FINAL    (CREATION DATE = 08/03/82)

* * * * * * * * * * * * * * * * * * * * *   C R O S S T A B U L A T I O N   O F   * * * * * * * * * * * * * * * * * * * *
    RQ29      UNDERSTANDING SINGLE BOOK DISPLAY EASY        BY  LIBTYPE   LIBRARY GROUPING BY TYPE OF LIBRARY
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * PAGE  1 OF  1

                    LIBTYPE
           COUNT  I
         ROW PCT  IA.R.L. L OTHER AC COMMUNIT PUBLIC    STATE AN   ROW
         COL PCT  IIBS      ADEMIC   Y COLLEG           D FEDERA  TOTAL
         TOT PCT  I      1.I      2.I      3.I      4.I      5.I
RQ29     --------+--------+--------+--------+--------+--------+
             -2.  I    65  I     6  I     1  I    36  I     7  I    115
  STRONGLY DISAGRE I  56.5  I   5.2  I   0.9  I  31.3  I   6.1  I    1.6
                  I   1.6  I   1.0  I   0.7  I   2.1  I   1.5  I
                  I   0.9  I   0.1  I   0.0  I   0.5  I   0.1  I
                 -+--------+--------+--------+--------+--------+
             -1.  I   296  I    56  I     4  I   148  I    31  I    535
  DISAGREE        I  55.3  I  10.5  I   0.7  I  27.7  I   5.8  I    7.7
                  I   7.4  I   9.2  I   3.0  I   8.4  I   6.7  I
                  I   4.2  I   0.8  I   0.1  I   2.1  I   0.4  I
                 -+--------+--------+--------+--------+--------+
              0.  I   437  I    66  I    20  I   219  I    41  I    783
  NEITHER A OR D  I  55.8  I   8.4  I   2.6  I  28.0  I   5.2  I   11.2
                  I  10.9  I  10.9  I  14.9  I  12.5  I   8.8  I
                  I   6.3  I   0.9  I   0.3  I   3.1  I   0.6  I
                 -+--------+--------+--------+--------+--------+
              1.  I  2340  I   384  I    84  I  1055  I   276  I   4139
  AGREE           I  56.5  I   9.3  I   2.0  I  25.5  I   6.7  I   59.2
                  I  58.2  I  63.2  I  62.7  I  60.1  I  59.2  I
                  I  33.5  I   5.5  I   1.2  I  15.1  I   4.0  I
                 -+--------+--------+--------+--------+--------+
              2.  I   884  I    96  I    25  I   298  I   111  I   1414
  STRONGLY AGREE  I  62.5  I   6.8  I   1.8  I  21.1  I   7.9  I   20.2
                  I  22.0  I  15.8  I  18.7  I  17.0  I  23.8  I
                  I  12.7  I   1.4  I   0.4  I   4.3  I   1.6  I
                 -+--------+--------+--------+--------+--------+
          COLUMN     4022      608      134     1756      466     6986
           TOTAL     57.6      8.7      1.9     25.1      6.7    100.0

    1 OUT OF    25 (  4.0%) OF THE VALID CELLS HAVE EXPECTED CELL FREQUENCY LESS THAN 5.0.
MINIMUM EXPECTED CELL FREQUENCY =  2.206
CHI SQUARE =    46.48723 WITH  16 DEGREES OF FREEDOM   SIGNIFICANCE =  0.0001
PEARSON'S R =-0.02679  SIGNIFICANCE =  0.0126

NUMBER OF MISSING OBSERVATIONS =    1108
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CLR USER QUESTIONNAIRE: LIBRARY TYPE COMPARISON XTABS                                  08/05/82        PAGE   51

FILE   FINAL    (CREATION DATE = 08/03/82)

* * * * * * * * * * * * * * * * * * * * *   C R O S S T A B U L A T I O N   O F   * * * * * * * * * * * * * * * * *
   RQ30      UNDERSTANDING MULTIPLE BOOK DISPLAY DIFF      BY  LIBTYPE   LIBRARY GROUPING BY TYPE OF LIBRARY
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *  PAGE  1 OF   1

                    LIBTYPE

            COUNT  I
          ROW PCT  IA.R.L. L OTHER AC COMMUNIT PUBLIC    STATE AN   ROW
          COL PCT  IIBS      ADEMIC   Y COLLEG           D FEDERA  TOTAL
          TOT PCT  I      1.I      2.I      3.I      4.I      5.I
RQ30      --------I--------I--------I--------I--------I--------I
              -2.  I   791  I    89  I    34  I   302  I   108  I  1324
  STRONGLY DISAGRE I  59.7  I   6.7  I   2.6  I  22.8  I   8.2  I  19.2
                   I  19.8  I  14.9  I  23.9  I  17.7  I  22.8  I
                   I  11.4  I   1.3  I   0.5  I   4.4  I   1.6  I
                  -I--------I--------I--------I--------I--------I
              -1.  I  2166  I   319  I    81  I   913  I   267  I  3746
  DISAGREE         I  57.8  I   8.5  I   2.2  I  24.4  I   7.1  I  54.2
                   I  54.3  I  53.4  I  57.0  I  53.4  I  56.3  I
                   I  31.3  I   4.6  I   1.2  I  13.2  I   3.9  I
                  -I--------I--------I--------I--------I--------I
               0.  I   604  I   112  I    19  I   265  I    55  I  1055
  NEITHER A OR D   I  57.3  I  10.6  I   1.8  I  25.1  I   5.2  I  15.3
                   I  15.1  I  18.8  I  13.4  I  15.5  I  11.6  I
                   I   8.7  I   1.6  I   0.3  I   3.8  I   0.8  I
                  -I--------I--------I--------I--------I--------I
               1.  I   345  I    74  I     6  I   186  I    37  I   648
  AGREE            I  53.2  I  11.4  I   0.9  I  28.7  I   5.7  I   9.4
                   I   8.7  I  12.4  I   4.2  I  10.9  I   7.8  I
                   I   5.0  I   1.1  I   0.1  I   2.7  I   0.5  I
                  -I--------I--------I--------I--------I--------I
               2.  I    81  I     3  I     2  I    45  I     7  I   138
  STRONGLY AGREE   I  58.7  I   2.2  I   1.4  I  32.6  I   5.1  I   2.0
                   I   2.0  I   0.5  I   1.4  I   2.6  I   1.5  I
                   I   1.2  I   0.0  I   0.0  I   0.7  I   0.1  I
                  -I--------I--------I--------I--------I--------I
           COLUMN     3987      597      142     1711      474     6911
            TOTAL     57.7      8.6      2.1     24.8      6.9    100.0

    1 OUT OF    25 (  4.0%) OF THE VALID CELLS HAVE EXPECTED CELL FREQUENCY LESS THAN 5.0.
MINIMUM EXPECTED CELL FREQUENCY =   2.835
CHI SQUARE =     52.23840 WITH  16 DEGREES OF FREEDOM   SIGNIFICANCE =  0.0000
PEARSON'S R = 0.01214  SIGNIFICANCE =  0.1564

NUMBER OF MISSING OBSERVATIONS =     1183
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CLR USER QUESTIONNAIRE: LIBRARY TYPE COMPARISON XTABS                                   08/05/82        PAGE   52

FILE   FINAL    (CREATION DATE = 08/03/82)

* * * * * * * * * * * * * * * * * * * *  C R O S S T A B U L A T I O N   O F  * * * * * * * * * * * * * * * * * * * *
   RQ31      INTERRUPTING-STOPPING THE DISPLAY EASY       BY  LIBTYPE   LIBRARY GROUPING BY TYPE OF LIBRARY
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * PAGE  1 OF  1

                  LIBTYPE
          COUNT  I
        ROW PCT  IA.R.L. L OTHER AC COMMUNIT PUBLIC    STATE AN  ROW
        COL PCT  IIBS      ADEMIC   Y COLLEG           D FEDERA  TOTAL
        TOT PCT  I      1.I      2.I      3.I      4.I      5.I
RQ31    --------I--------I--------I--------I--------I--------I
            -2.  I   232  I    19  I    14  I    24  I    18  I   307
  STRONGLY DISAGRE I  75.6  I   6.2  I   4.6  I   7.8  I   5.9  I   6.0
                 I   6.4  I   3.6  I  12.5  I   5.2  I   4.2  I
                 I   4.5  I   0.4  I   0.3  I   0.5  I   0.3  I
                -I--------I--------I--------I--------I--------I
            -1.  I   680  I   123  I    18  I    81  I    87  I   989
  DISAGREE       I  68.8  I  12.4  I   1.8  I   8.2  I   8.8  I  19.2
                 I  18.8  I  23.3  I  16.1  I  17.5  I  20.3  I
                 I  13.2  I   2.4  I   0.3  I   1.6  I   1.7  I
                -I--------I--------I--------I--------I--------I
             0.  I   697  I   106  I    23  I    69  I    78  I   973
  NEITHER A OR D I  71.6  I  10.9  I   2.4  I   7.1  I   8.0  I  18.9
                 I  19.3  I  20.1  I  20.5  I  14.9  I  18.2  I
                 I  13.5  I   2.1  I   0.4  I   1.3  I   1.5  I
                -I--------I--------I--------I--------I--------I
             1.  I  1502  I   237  I    44  I   218  I   206  I  2207
  AGREE          I  68.1  I  10.7  I   2.0  I   9.9  I   9.3  I  42.9
                 I  41.5  I  44.9  I  39.3  I  47.1  I  48.0  I
                 I  29.2  I   4.6  I   0.9  I   4.2  I   4.0  I
                -I--------I--------I--------I--------I--------I
             2.  I   507  I    43  I    13  I    71  I    40  I   674
  STRONGLY AGREE I  75.2  I   6.4  I   1.9  I  10.5  I   5.9  I  13.1
                 I  14.0  I   8.1  I  11.6  I  15.3  I   9.3  I
                 I   9.8  I   0.8  I   0.3  I   1.4  I   0.8  I
                -I--------I--------I--------I--------I--------I
         COLUMN     3618      528      112      463      429     5150
          TOTAL     70.3     10.3      2.2      9.0      8.3    100.0

CHI SQUARE =     54.01665 WITH  16 DEGREES OF FREEDOM   SIGNIFICANCE =  0.0000
PEARSON'S R = 0.01220  SIGNIFICANCE =  0.1906

NUMBER OF MISSING OBSERVATIONS =     2944
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FILE   FINAL    (CREATION DATE = 08/03/82)

* * * * * * * * * * * * * * * * * * *  C R O S S T A B U L A T I O N   O F  * * * * * * * * * * * * * * * * * *
   RQ32      TYPING IN EXACT SPELLING IS DIFF               BY  LIBTYPE   LIBRARY GROUPING BY TYPE OF LIBRARY
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *  PAGE  1 OF  1

                  LIBTYPE
          COUNT  I
        ROW PCT  IA.R.L. L OTHER AC COMMUNIT PUBLIC    STATE AN  ROW
        COL PCT  IIBS      ADEMIC   Y COLLEG           D FEDERA  TOTAL
        TOT PCT  I      1.I      2.I      3.I      4.I      5.I
RQ32    --------I--------I--------I--------I--------I--------I
            -2.  I   792  I    87  I    34  I   188  I    81  I   1182
  STRONGLY DISAGRE I  67.0  I   7.4  I   2.9  I  15.9  I   6.9  I   18.0
                 I  19.3  I  14.0  I  24.1  I  15.4  I  16.5  I
                 I  12.1  I   1.3  I   0.5  I   2.9  I   1.2  I
                -I--------I--------I--------I--------I--------I
            -1.  I  1796  I   318  I    55  I   513  I   272  I   2954
  DISAGREE       I  60.8  I  10.8  I   1.9  I  17.4  I   9.2  I   45.0
                 I  43.8  I  51.2  I  39.0  I  41.9  I  55.5  I
                 I  27.3  I   4.8  I   0.8  I   7.8  I   4.1  I
                -I--------I--------I--------I--------I--------I
             0.  I   636  I    90  I    22  I   165  I    67  I    980
  NEITHER A OR D I  64.9  I   9.2  I   2.2  I  16.8  I   6.8  I   14.9
                 I  15.5  I  14.5  I  15.6  I  13.5  I  13.7  I
                 I   9.7  I   1.4  I   0.3  I   2.5  I   1.0  I
                -I--------I--------I--------I--------I--------I
             1.  I   708  I   107  I    23  I   296  I    57  I   1191
  AGREE          I  59.4  I   9.0  I   1.9  I  24.9  I   4.8  I   18.1
                 I  17.3  I  17.2  I  16.3  I  24.2  I  11.6  I
                 I  10.8  I   1.6  I   0.4  I   4.5  I   0.9  I
                -I--------I--------I--------I--------I--------I
             2.  I   164  I    19  I     7  I    61  I    13  I    264
  STRONGLY AGREE I  62.1  I   7.2  I   2.7  I  23.1  I   4.9  I    4.0
                 I   4.0  I   3.1  I   5.0  I   5.0  I   2.7  I
                 I   2.5  I   0.3  I   0.1  I   0.9  I   0.2  I
                -I--------I--------I--------I--------I--------I
         COLUMN     4096      621      141     1223      490     6571
          TOTAL     62.3      9.5      2.1     18.6      7.5    100.0

CHI SQUARE =    88.64006 WITH  16 DEGREES OF FREEDOM   SIGNIFICANCE =  0.0000
PEARSON'S R = 0.02328  SIGNIFICANCE =  0.0296

NUMBER OF MISSING OBSERVATIONS =     1523
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CLR USER QUESTIONNAIRE: LIBRARY TYPE COMPARISON XTABS                                      08/05/82        PAGE   54

FILE   FINAL    (CREATION DATE = 08/03/82)

* * * * * * * * * * * * * * * * * * * *   C R O S S T A B U L A T I O N   O F   * * * * * * * * * * * * * * * * * * *
   RQ33      KNOWING WHAT IS INCLUDED EASY                      BY  LIBTYPE   LIBRARY GROUPING BY TYPE OF LIBRARY
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *  PAGE  1 OF  1

                   LIBTYPE
            COUNT  I
          ROW PCT  IA.R.L. L OTHER AC COMMUNIT PUBLIC    STATE AN   ROW
          COL PCT  IIBS      ADEMIC   Y COLLEG           D FEDERA  TOTAL
          TOT PCT  I      1.I      2.I      3.I      4.I      5.I
RQ33      --------+--------+--------+--------+--------+--------I
              -2.  I   284  I    30  I    10  I   108  I    32  I    464
  STRONGLY DISAGRE I  61.2  I   6.5  I   2.2  I  23.3  I   6.9  I    6.9
                   I   7.3  I   5.1  I   7.5  I   6.4  I   6.9  I
                   I   4.2  I   0.4  I   0.1  I   1.6  I   0.5  I
                  -+--------+--------+--------+--------+--------I
              -1.  I  1144  I   208  I    38  I   446  I   168  I   2004
  DISAGREE         I  57.1  I  10.4  I   1.9  I  22.3  I   8.4  I   29.8
                   I  29.5  I  35.5  I  28.4  I  26.6  I  36.4  I
                   I  17.0  I   3.1  I   0.6  I   6.6  I   2.5  I
                  -+--------+--------+--------+--------+--------I
               0.  I  1087  I   182  I    37  I   462  I   108  I   1876
  NEITHER A OR D   I  57.9  I   9.7  I   2.0  I  24.6  I   5.8  I   27.9
                   I  28.0  I  31.1  I  27.6  I  27.6  I  23.4  I
                   I  16.1  I   2.7  I   0.5  I   6.9  I   1.6  I
                  -+--------+--------+--------+--------+--------I
               1.  I  1096  I   149  I    42  I   540  I   129  I   1956
  AGREE            I  56.0  I   7.6  I   2.1  I  27.6  I   6.6  I   29.0
                   I  28.3  I  25.4  I  31.3  I  32.2  I  27.9  I
                   I  16.3  I   2.2  I   0.6  I   8.0  I   1.9  I
                  -+--------+--------+--------+--------+--------I
               2.  I   265  I    17  I     7  I   120  I    25  I    434
  STRONGLY AGREE   I  61.1  I   3.9  I   1.6  I  27.6  I   5.8  I    6.4
                   I   6.8  I   2.9  I   5.2  I   7.2  I   5.4  I
                   I   3.9  I   0.3  I   0.1  I   1.8  I   0.4  I
                  -+--------+--------+--------+--------+--------I
           COLUMN     3876      586      134     1676      462     6734
            TOTAL     57.6      8.7      2.0     24.9      6.9    100.0

CHI SQUARE =     53.31171 WITH  16 DEGREES OF FREEDOM   SIGNIFICANCE =  0.0000
PEARSON'S R = 0.01678  SIGNIFICANCE =  0.0842

NUMBER OF MISSING OBSERVATIONS =     1360
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CLR USER QUESTIONNAIRE: LIBRARY TYPE COMPARISON XTABS                              08/05/82        PAGE   55

FILE   FINAL    (CREATION DATE = 08/03/82)

* * * * * * * * * * * * * * * * * * * *   C R O S S T A B U L A T I O N   O F   * * * * * * * * * * * * * * * * * * * *
   RQ34      ORDER OF DISPLAY EASY TO UNDERST                  BY  LIBTYPE   LIBRARY GROUPING BY TYPE OF LIBRARY
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *  PAGE  1 OF  1

                    LIBTYPE

              COUNT  I
             ROW PCT IA.R.L. L OTHER AC COMMUNIT PUBLIC    STATE AN   ROW
             COL PCT IIBS      ADEMIC   Y COLLEG           D FEDERA   TOTAL
             TOT PCT I      1.I      2.I      3.I      4.I      5.I
RQ34         --------I--------I--------I--------I--------I--------I
                 -2. I   108  I    11  I     3  I    49  I    17  I    188
  STRONGLY DISAGRE   I  57.4  I   5.9  I   1.6  I  26.1  I   9.0  I    2.6
                     I   2.6  I   1.8  I   2.1  I   2.7  I   3.5  I
                     I   1.5  I   0.2  I   0.0  I   0.7  I   0.2  I
                    -I--------I--------I--------I--------I--------I
                 -1. I   401  I    57  I     8  I   186  I    50  I    702
  DISAGREE           I  57.1  I   8.1  I   1.1  I  26.5  I   7.1  I    9.8
                     I   9.8  I   9.1  I   5.6  I  10.2  I  10.3  I
                     I   5.6  I   0.8  I   0.1  I   2.6  I   0.7  I
                    -I--------I--------I--------I--------I--------I
                  0. I   723  I   133  I    31  I   262  I    83  I   1232
  NEITHER A OR D     I  58.7  I  10.8  I   2.5  I  21.3  I   6.7  I   17.2
                     I  17.7  I  21.3  I  21.7  I  14.3  I  17.1  I
                     I  10.1  I   1.9  I   0.4  I   3.7  I   1.2  I
                    -I--------I--------I--------I--------I--------I
                  1. I  2308  I   382  I    86  I  1071  I   284  I   4131
  AGREE              I  55.9  I   9.2  I   2.1  I  25.9  I   6.9  I   57.6
                     I  56.4  I  61.1  I  60.1  I  58.5  I  58.4  I
                     I  32.2  I   5.3  I   1.2  I  14.9  I   4.0  I
                    -I--------I--------I--------I--------I--------I
                  2. I   550  I    42  I    15  I   264  I    52  I    923
  STRONGLY AGREE     I  59.6  I   4.6  I   1.6  I  28.6  I   5.6  I   12.9
                     I  13.4  I   6.7  I  10.5  I  14.4  I  10.7  I
                     I   7.7  I   0.6  I   0.2  I   3.7  I   0.7  I
                    -I--------I--------I--------I--------I--------I
              COLUMN     4090      625      143     1832      486     7176
               TOTAL     57.0      8.7      2.0     25.5      6.8    100.0

    1 OUT OF    25 (  4.0%) OF THE VALID CELLS HAVE EXPECTED CELL FREQUENCY LESS THAN 5.0.
MINIMUM EXPECTED CELL FREQUENCY =  3.746
CHI SQUARE =    51.83913 WITH  16 DEGREES OF FREEDOM   SIGNIFICANCE =  0.0000
PEARSON'S R = 0.00526  SIGNIFICANCE =  0.3280

NUMBER OF MISSING OBSERVATIONS =      918
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CLR USER QUESTIONNAIRE: LIBRARY TYPE COMPARISON XTABS                                  08/05/82        PAGE   56

FILE   FINAL    (CREATION DATE = 08/03/82)

* * * * * * * * * * * * * * * * * * * *   C R O S S T A B U L A T I O N   O F   * * * * * * * * * * * * * * * * * * *
    RQ35      DISPLAYED MESSAGES TOO LONG                          BY  LIBTYPE   LIBRARY GROUPING BY TYPE OF LIBRARY
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *  PAGE  1 OF  1

                      LIBTYPE
               COUNT  I
             ROW PCT  IA.R.L. L OTHER AC COMMUNIT PUBLIC    STATE AN  ROW
             COL PCT  IIBS      ADEMIC   Y COLLEG           D FEDERA  TOTAL
             TOT PCT  I      1.I      2.I      3.I      4.I      5.I
RQ35          --------I--------I--------I--------I--------I--------I
                 -2.  I   599  I    75  I    25  I   271  I    70  I   1040
  STRONGLY DISAGRE    I  57.6  I   7.2  I   2.4  I  26.1  I   6.7  I   14.8
                      I  14.9  I  12.0  I  17.6  I  15.4  I  14.5  I
                      I   8.5  I   1.1  I   0.4  I   3.9  I   1.0  I
                     -I--------I--------I--------I--------I--------I
                 -1.  I  2075  I   321  I    84  I   924  I   282  I   3686
  DISAGREE            I  56.3  I   8.7  I   2.3  I  25.1  I   7.7  I   52.5
                      I  51.8  I  51.4  I  59.2  I  52.5  I  58.4  I
                      I  29.6  I   4.6  I   1.2  I  13.2  I   4.0  I
                     -I--------I--------I--------I--------I--------I
                  0.  I   927  I   143  I    26  I   390  I   104  I   1590
  NEITHER A OR D      I  58.3  I   9.0  I   1.6  I  24.5  I   6.5  I   22.7
                      I  23.1  I  22.9  I  18.3  I  22.2  I  21.5  I
                      I  13.2  I   2.0  I   0.4  I   5.6  I   1.5  I
                     -I--------I--------I--------I--------I--------I
                  1.  I   314  I    65  I     5  I   130  I    20  I    534
  AGREE               I  58.8  I  12.2  I   0.9  I  24.3  I   3.7  I    7.6
                      I   7.8  I  10.4  I   3.5  I   7.4  I   4.1  I
                      I   4.5  I   0.9  I   0.1  I   1.9  I   0.3  I
                     -I--------I--------I--------I--------I--------I
                  2.  I    93  I    20  I     2  I    45  I     7  I    167
  STRONGLY AGREE      I  55.7  I  12.0  I   1.2  I  26.9  I   4.2  I    2.4
                      I   2.3  I   3.2  I   1.4  I   2.6  I   1.4  I
                      I   1.3  I   0.3  I   0.0  I   0.6  I   0.1  I
                     -I--------I--------I--------I--------I--------I
              COLUMN     4008      624      142     1760      483     7017
               TOTAL     57.1      8.9      2.0     25.1      6.9    100.0

    1 OUT OF    25 (  4.0%) OF THE VALID CELLS HAVE EXPECTED CELL FREQUENCY LESS THAN 5.0.
MINIMUM EXPECTED CELL FREQUENCY =  3.380
CHI SQUARE =     33.49246 WITH  16 DEGREES OF FREEDOM   SIGNIFICANCE =  0.0064
PEARSON'S R =-0.02560  SIGNIFICANCE =  0.0160

NUMBER OF MISSING OBSERVATIONS =     1077
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CLR USER QUESTIONNAIRE: LIBRARY TYPE COMPARISON XTABS                              08/05/82         PAGE   57

FILE   FINAL    (CREATION DATE = 08/03/82)

* * * * * * * * * * * * * * * * * * * *   C R O S S T A B U L A T I O N   O F   * * * * * * * * * * * * * * * * * * * *
   RQ36      SEL FROM LIST OF CHOICES TOO MUCH TIME        BY  LIBTYPE   LIBRARY GROUPING BY TYPE OF LIBRARY
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * PAGE  1 OF  1

                LIBTYPE
         COUNT  I
        ROW PCT IA.R.L. L OTHER AC COMMUNIT PUBLIC    STATE AN  ROW
        COL PCT IIBS      ADEMIC   Y COLLEG           D FEDERA  TOTAL
        TOT PCT I      1.I      2.I      3.I      4.I      5.I
RQ36    --------I--------I--------I--------I--------I--------I
            -2. I   414  I    38  I    25  I   192  I    45  I    714
  STRONGLY DISAGRE I  58.0  I   5.3  I   3.5  I  26.9  I   6.3  I   10.3
                I  10.6  I   6.3  I  17.4  I  10.7  I   9.6  I
                I   6.0  I   0.5  I   0.4  I   2.8  I   0.6  I
               -I--------I--------I--------I--------I--------I
            -1. I  1860  I   309  I    72  I   888  I   241  I   3370
  DISAGREE      I  55.2  I   9.2  I   2.1  I  26.4  I   7.2  I   48.6
                I  47.5  I  50.8  I  50.0  I  49.5  I  51.2  I
                I  26.8  I   4.5  I   1.0  I  12.8  I   3.5  I
               -I--------I--------I--------I--------I--------I
             0. I   912  I   120  I    30  I   323  I   104  I   1489
  NEITHER A OR D I  61.2  I   8.1  I   2.0  I  21.7  I   7.0  I   21.5
                I  23.3  I  19.7  I  20.8  I  18.0  I  22.1  I
                I  13.2  I   1.7  I   0.4  I   4.7  I   1.5  I
               -I--------I--------I--------I--------I--------I
             1. I   603  I   107  I    15  I   290  I    65  I   1080
  AGREE         I  55.8  I   9.9  I   1.4  I  26.9  I   6.0  I   15.6
                I  15.4  I  17.6  I  10.4  I  16.2  I  13.8  I
                I   8.7  I   1.5  I   0.2  I   4.2  I   0.9  I
               -I--------I--------I--------I--------I--------I
             2. I   129  I    34  I     2  I   101  I    16  I    282
  STRONGLY AGREE I  45.7  I  12.1  I   0.7  I  35.8  I   5.7  I    4.1
                I   3.3  I   5.6  I   1.4  I   5.6  I   3.4  I
                I   1.9  I   0.5  I   0.0  I   1.5  I   0.2  I
               -I--------I--------I--------I--------I--------I
         COLUMN    3918      608      144     1794      471     6935
          TOTAL    56.5      8.8      2.1     25.9      6.8    100.0

CHI SQUARE =     65.64958 WITH  16 DEGREES OF FREEDOM   SIGNIFICANCE =  0.0000
PEARSON'S R = 0.00194  SIGNIFICANCE =  0.4359

NUMBER OF MISSING OBSERVATIONS =     1159
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CLR USER QUESTIONNAIRE: LIBRARY TYPE COMPARISON XTABS                    08/05/82       PAGE   58

FILE   FINAL    (CREATION DATE = 08/03/82)

* * * * * * * * * * * * * * * * * * * *   C R O S S T A B U L A T I O N   O F   * * * * * * * * * * * * * * * * * * * *
    RQ37      ENTERING COMMANDS DURING SEARCH DIFF          BY  LIBTYPE   LIBRARY GROUPING BY TYPE OF LIBRARY
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * PAGE  1 OF  1

                   LIBTYPE
         COUNT   I
        ROW PCT  IA.R.L. L OTHER AC COMMUNIT PUBLIC    STATE AN  ROW
        COL PCT  IIBS      ADEMIC   Y COLLEG           D FEDERA  TOTAL
        TOT PCT  I      1.I      2.I      3.I      4.I      5.I
RQ37    --------I--------I--------I--------I--------I--------I
            -2.  I   397  I    30  I    15  I   144  I    40  I   626
  STRONGLY DISAGRE I  63.4  I   4.8  I   2.4  I  23.0  I   6.4  I   9.6
                 I  10.6  I   5.3  I  12.0  I   9.1  I   8.6  I
                 I   6.1  I   0.5  I   0.2  I   2.2  I   0.6  I
                -I--------I--------I--------I--------I--------I
            -1.  I  1554  I   252  I    59  I   597  I   233  I  2695
  DISAGREE       I  57.7  I   9.4  I   2.2  I  22.2  I   8.6  I  41.5
                 I  41.3  I  44.5  I  47.2  I  37.7  I  50.0  I
                 I  23.9  I   3.9  I   0.9  I   9.2  I   3.6  I
                -I--------I--------I--------I--------I--------I
             0.  I   788  I   114  I    31  I   326  I    85  I  1344
  NEITHER A OR D I  58.6  I   8.5  I   2.3  I  24.3  I   6.3  I  20.7
                 I  21.0  I  20.1  I  24.8  I  20.6  I  18.2  I
                 I  12.1  I   1.8  I   0.5  I   5.0  I   1.3  I
                -I--------I--------I--------I--------I--------I
             1.  I   826  I   144  I    17  I   412  I    91  I  1490
  AGREE          I  55.4  I   9.7  I   1.1  I  27.7  I   6.1  I  22.9
                 I  22.0  I  25.4  I  13.6  I  26.0  I  19.5  I
                 I  12.7  I   2.2  I   0.3  I   6.3  I   1.4  I
                -I--------I--------I--------I--------I--------I
             2.  I   196  I    26  I     3  I   103  I    17  I   345
  STRONGLY AGREE I  56.8  I   7.5  I   0.9  I  29.9  I   4.9  I   5.3
                 I   5.2  I   4.6  I   2.4  I   6.5  I   3.6  I
                 I   3.0  I   0.4  I   0.0  I   1.6  I   0.3  I
                -I--------I--------I--------I--------I--------I
          COLUMN     3761     566      125     1582      466     6500
           TOTAL     57.9     8.7      1.9     24.3      7.2    100.0

CHI SQUARE =    60.65688 WITH  16 DEGREES OF FREEDOM   SIGNIFICANCE =  0.0000
PEARSON'S R = 0.02092  SIGNIFICANCE =  0.0459

NUMBER OF MISSING OBSERVATIONS =     1594
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FILE   FINAL    (CREATION DATE = 08/03/82)
* * * * * * * * * * * * * * * * * * * * *   C R O S S T A B U L A T I O N   O F   * * * * * * * * * * * * * * * * * * * *
   RQ38      RATE OF RESPONSE TOO SLOW                          BY  LIBTYPE   LIBRARY GROUPING BY TYPE OF LIBRARY
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *  PAGE  1 OF  1

                    LIBTYPE
            COUNT  I
          ROW PCT  IA.R.L. L OTHER AC COMMUNIT PUBLIC    STATE AN   ROW
          COL PCT  IIBS      ADEMIC   Y COLLEG           D FEDERA  TOTAL
          TOT PCT  I      1.I      2.I      3.I      4.I      5.I
RQ38       --------I--------I--------I--------I--------I--------I
              -2.  I   606  I    88  I    18  I   152  I    38  I    902
  STRONGLY DISAGRE I  67.2  I   9.8  I   2.0  I  16.9  I   4.2  I   12.6
                   I  14.7  I  14.1  I  12.7  I   8.4  I   7.8  I
                   I   8.4  I   1.2  I   0.3  I   2.1  I   0.5  I
                  -I--------I--------I--------I--------I--------I
              -1.  I  1840  I   291  I    63  I   597  I   161  I   2952
  DISAGREE         I  62.3  I   9.9  I   2.1  I  20.2  I   5.5  I   41.1
                   I  44.7  I  46.8  I  44.4  I  32.8  I  33.1  I
                   I  25.6  I   4.1  I   0.9  I   8.3  I   2.2  I
                  -I--------I--------I--------I--------I--------I
               0.  I   686  I    88  I    33  I   294  I    91  I   1192
  NEITHER A OR D   I  57.6  I   7.4  I   2.8  I  24.7  I   7.6  I   16.6
                   I  16.7  I  14.1  I  23.2  I  16.2  I  18.7  I
                   I   9.6  I   1.2  I   0.5  I   4.1  I   1.3  I
                  -I--------I--------I--------I--------I--------I
               1.  I   689  I   113  I    24  I   481  I   135  I   1442
  AGREE            I  47.8  I   7.8  I   1.7  I  33.4  I   9.4  I   20.1
                   I  16.7  I  18.2  I  16.9  I  26.5  I  27.8  I
                   I   9.6  I   1.6  I   0.3  I   6.7  I   1.9  I
                  -I--------I--------I--------I--------I--------I
               2.  I   293  I    42  I     4  I   294  I    61  I    694
  STRONGLY AGREE   I  42.2  I   6.1  I   0.6  I  42.4  I   8.8  I    9.7
                   I   7.1  I   6.8  I   2.8  I  16.2  I  12.6  I
                   I   4.1  I   0.6  I   0.1  I   4.1  I   0.8  I
                  -I--------I--------I--------I--------I--------I
           COLUMN     4114      622      142     1818      486     7182
            TOTAL     57.3      8.7      2.0     25.3      6.8    100.0

CHI SQUARE =   314.07861 WITH  16 DEGREES OF FREEDOM   SIGNIFICANCE =  0.0
PEARSON'S R = 0.18947  SIGNIFICANCE =  0.0000

NUMBER OF MISSING OBSERVATIONS =      912
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CLR USER QUESTIONNAIRE: LIBRARY TYPE COMPARISON XTABS                                 08/05/82        PAGE   60

FILE   FINAL    (CREATION DATE = 08/03/82)

* * * * * * * * * * * * * * * * * * * *   C R O S S T A B U L A T I O N   O F   * * * * * * * * * * * * * * * * * * *
   RQ39      AVAIL OF SIGNS AND BROCHURES ADEQUATE         BY  LIBTYPE   LIBRARY GROUPING BY TYPE OF LIBRARY
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * PAGE  1 OF   1

                     LIBTYPE
             COUNT  I
           ROW PCT  IA.R.L. L OTHER AC COMMUNIT PUBLIC    STATE AN  ROW
           COL PCT  IIBS      ADEMIC   Y COLLEG           D FEDERA  TOTAL
           TOT PCT  I      1.I      2.I      3.I      4.I      5.I
RQ39       --------I--------I--------I--------I--------I--------I
               -2.  I   219  I    22  I     3  I   132  I    17  I   393
  STRONGLY DISAGRE  I  55.7  I   5.6  I   0.8  I  33.6  I   4.3  I   5.7
                    I   5.5  I   3.7  I   2.2  I   7.8  I   3.6  I
                    I   3.2  I   0.3  I   0.0  I   1.9  I   0.2  I
                   -I--------I--------I--------I--------I--------I
               -1.  I   606  I    88  I    17  I   293  I    73  I  1077
  DISAGREE          I  56.3  I   8.2  I   1.6  I  27.2  I   6.8  I  15.7
                    I  15.3  I  14.8  I  12.6  I  17.3  I  15.4  I
                    I   8.8  I   1.3  I   0.2  I   4.3  I   1.1  I
                   -I--------I--------I--------I--------I--------I
                0.  I   593  I    84  I    32  I   331  I    58  I  1098
  NEITHER A OR D    I  54.0  I   7.7  I   2.9  I  30.1  I   5.3  I  16.0
                    I  15.0  I  14.1  I  23.7  I  19.5  I  12.3  I
                    I   8.7  I   1.2  I   0.5  I   4.8  I   0.8  I
                   -I--------I--------I--------I--------I--------I
                1.  I  2082  I   338  I    65  I   802  I   281  I  3568
  AGREE             I  58.4  I   9.5  I   1.8  I  22.5  I   7.9  I  52.1
                    I  52.7  I  56.8  I  48.1  I  47.3  I  59.4  I
                    I  30.4  I   4.9  I   0.9  I  11.7  I   4.1  I
                   -I--------I--------I--------I--------I--------I
                2.  I   453  I    63  I    18  I   136  I    44  I   714
  STRONGLY AGREE    I  63.4  I   8.8  I   2.5  I  19.0  I   6.2  I  10.4
                    I  11.5  I  10.6  I  13.3  I   8.0  I   9.3  I
                    I   6.6  I   0.9  I   0.3  I   2.0  I   0.6  I
                   -I--------I--------I--------I--------I--------I
            COLUMN     3953      595      135     1694      473     6850
             TOTAL     57.7      8.7      2.0     24.7      6.9    100.0

CHI SQUARE =    84.59540 WITH  16 DEGREES OF FREEDOM   SIGNIFICANCE =  0.0000
PEARSON'S R =-0.04658  SIGNIFICANCE =  0.0001

NUMBER OF MISSING OBSERVATIONS =    1244
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CLR USER QUESTIONNAIRE: LIBRARY TYPE COMPARISON XTABS                                    08/05/82        PAGE   61

FILE   FINAL    (CREATION DATE = 08/03/82)

* * * * * * * * * * * * * * * * * * *   C R O S S T A B U L A T I O N   O F   * * * * * * * * * * * * * * * * * * *
   RQ40      SIGNS AND BROCHURES NOT VERY USEFUL            BY  LIBTYPE   LIBRARY GROUPING BY TYPE OF LIBRARY
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *  PAGE  1 OF  1

                     LIBTYPE
             COUNT  I
           ROW PCT  IA.R.L. L OTHER AC COMMUNIT PUBLIC    STATE AN   ROW
           COL PCT  IIBS      ADEMIC   Y COLLEG           D FEDERA  TOTAL
           TOT PCT  I      1.I      2.I      3.I      4.I      5.I
RQ40       --------I--------I--------I--------I--------I--------I
               -2.  I   791  I    95  I    24  I   248  I    86  I   1244
  STRONGLY DISAGRE  I  63.6  I   7.6  I   1.9  I  19.9  I   6.9  I   18.6
                    I  20.4  I  16.4  I  17.6  I  15.2  I  18.7  I
                    I  11.8  I   1.4  I   0.4  I   3.7  I   1.3  I
                   -I--------I--------I--------I--------I--------I
               -1.  I  1892  I   319  I    62  I   732  I   235  I   3240
  DISAGREE          I  58.4  I   9.8  I   1.9  I  22.6  I   7.3  I   48.5
                    I  48.8  I  55.2  I  45.6  I  44.7  I  51.0  I
                    I  28.3  I   4.8  I   0.9  I  10.9  I   3.5  I
                   -I--------I--------I--------I--------I--------I
                0.  I   710  I    92  I    32  I   367  I    72  I   1273
  NEITHER A OR D    I  55.8  I   7.2  I   2.5  I  28.8  I   5.7  I   19.0
                    I  18.3  I  15.9  I  23.5  I  22.4  I  15.6  I
                    I  10.6  I   1.4  I   0.5  I   5.5  I   1.1  I
                   -I--------I--------I--------I--------I--------I
                1.  I   349  I    63  I    15  I   213  I    51  I    691
  AGREE             I  50.5  I   9.1  I   2.2  I  30.8  I   7.4  I   10.3
                    I   9.0  I  10.9  I  11.0  I  13.0  I  11.1  I
                    I   5.2  I   0.9  I   0.2  I   3.2  I   0.8  I
                   -I--------I--------I--------I--------I--------I
                2.  I   134  I     9  I     3  I    76  I    17  I    239
  STRONGLY AGREE    I  56.1  I   3.8  I   1.3  I  31.8  I   7.1  I    3.6
                    I   3.5  I   1.6  I   2.2  I   4.6  I   3.7  I
                    I   2.0  I   0.1  I   0.0  I   1.1  I   0.3  I
                   -I--------I--------I--------I--------I--------I
            COLUMN     3876      578      136     1636      461     6687
             TOTAL     58.0      8.6      2.0     24.5      6.9    100.0

    1 OUT OF    25 (  4.0%) OF THE VALID CELLS HAVE EXPECTED CELL FREQUENCY LESS THAN 5.0.
MINIMUM EXPECTED CELL FREQUENCY =  4.861
CHI SQUARE =     79.17741 WITH  16 DEGREES OF FREEDOM   SIGNIFICANCE =  0.0000
PEARSON'S R = 0.07052  SIGNIFICANCE =  0.0000

NUMBER OF MISSING OBSERVATIONS =     1407
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CLR USER QUESTIONNAIRE: LIBRARY TYPE COMPARISON XTABS                                08/05/82        PAGE   62

FILE   FINAL    (CREATION DATE = 08/03/82)

* * * * * * * * * * * * * * * * *  C R O S S T A B U L A T I O N   O F  * * * * * * * * * * * * * * * * * *
   RQ41      LIB STAFF ADVICE NOT HELPFUL                      BY  LIBTYPE   LIBRARY GROUPING BY TYPE OF LIBRARY
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * PAGE  1 OF  1

                    LIBTYPE

             COUNT  I
           ROW PCT  IA.R.L. L OTHER AC COMMUNIT PUBLIC    STATE AN  ROW
           COL PCT  IIBS      ADEMIC   Y COLLEG           D FEDERA  TOTAL
           TOT PCT  I      1.I      2.I      3.I      4.I      5.I
RQ41       ---------I--------I--------I--------I--------I--------I
               -2.  I   720  I   169  I    38  I   540  I   204  I   1671
  STRONGLY DISAGRE  I  43.1  I  10.1  I   2.3  I  32.3  I  12.2  I   28.3
                    I  22.5  I  30.7  I  28.4  I  34.4  I  45.6  I
                    I  12.2  I   2.5  I   0.6  I   9.2  I   3.5  I
                   -I--------I--------I--------I--------I--------I
               -1.  I  1290  I   251  I    61  I   672  I   172  I   2446
  DISAGREE          I  52.7  I  10.3  I   2.5  I  27.5  I   7.0  I   41.5
                    I  40.4  I  45.6  I  45.5  I  42.7  I  38.5  I
                    I  21.9  I   4.3  I   1.0  I  11.4  I   2.9  I
                   -I--------I--------I--------I--------I--------I
                0.  I   785  I    71  I    21  I   239  I    45  I   1161
  NEITHER A OR D    I  67.6  I   6.1  I   1.8  I  20.6  I   3.9  I   19.7
                    I  24.6  I  12.9  I  15.7  I  15.2  I  10.1  I
                    I  13.3  I   1.2  I   0.4  I   4.1  I   0.8  I
                   -I--------I--------I--------I--------I--------I
                1.  I   276  I    52  I    11  I    81  I    17  I    437
  AGREE             I  63.2  I  11.9  I   2.5  I  18.5  I   3.9  I    7.4
                    I   8.6  I   9.4  I   8.2  I   5.2  I   3.8  I
                    I   4.7  I   0.9  I   0.2  I   1.4  I   0.3  I
                   -I--------I--------I--------I--------I--------I
                2.  I   122  I     8  I     3  I    40  I     9  I    182
  STRONGLY AGREE    I  67.0  I   4.4  I   1.6  I  22.0  I   4.9  I    3.1
                    I   3.8  I   1.5  I   2.2  I   2.5  I   2.0  I
                    I   2.1  I   0.1  I   0.1  I   0.7  I   0.2  I
                   -I--------I--------I--------I--------I--------I
            COLUMN     3193      551      134     1572      447     5897
             TOTAL     54.1      9.3      2.3     26.7      7.6    100.0

     1 OUT OF    25 (  4.0%) OF THE VALID CELLS HAVE EXPECTED CELL FREQUENCY LESS THAN 5.0.
MINIMUM EXPECTED CELL FREQUENCY =   4.136
CHI SQUARE =    243.52049 WITH  16 DEGREES OF FREEDOM   SIGNIFICANCE =  0.0
PEARSON'S R =-0.16923  SIGNIFICANCE =  0.0000

NUMBER OF MISSING OBSERVATIONS =     2197
```

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CLR USER QUESTIONNAIRE: LIBRARY TYPE COMPARISON XTABS                        08/05/82        PAGE   63

FILE   FINAL    (CREATION DATE = 08/03/82)

* * * * * * * * * * * * * * * * * * * *   C R O S S T A B U L A T I O N   O F   * * * * * * * * * * * * * * * * * * * *
   RQ42      HARD TO FIND FREE TERMINAL                          BY  LIBTYPE   LIBRARY GROUPING BY TYPE OF LIBRARY
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * PAGE  1 OF  1

                    LIBTYPE
             COUNT  I
            ROW PCT IA.R.L. L OTHER AC COMMUNIT PUBLIC    STATE AN   ROW
            COL PCT IIBS      ADEMIC   Y COLLEG          D FEDERA   TOTAL
            TOT PCT I      1.I      2.I      3.I      4.I      5.I
RQ42        --------I--------I--------I--------I--------I--------I
               -2.  I   557  I    64  I    12  I   176  I    61  I    870
  STRONGLY DISAGRE  I  64.0  I   7.4  I   1.4  I  20.2  I   7.0  I   12.4
                    I  13.9  I  10.7  I   8.5  I   9.9  I  12.7  I
                    I   8.0  I   0.9  I   0.2  I   2.5  I   0.9  I
                   -I--------I--------I--------I--------I--------I
               -1.  I  1670  I   288  I    50  I   618  I   234  I   2860
  DISAGREE          I  58.4  I  10.1  I   1.7  I  21.6  I   8.2  I   40.9
                    I  41.8  I  48.2  I  35.5  I  34.9  I  48.9  I
                    I  23.9  I   4.1  I   0.7  I   8.8  I   3.3  I
                   -I--------I--------I--------I--------I--------I
                0.  I   701  I   128  I    35  I   343  I   101  I   1308
  NEITHER A OR D    I  53.6  I   9.8  I   2.7  I  26.2  I   7.7  I   18.7
                    I  17.5  I  21.4  I  24.8  I  19.3  I  21.1  I
                    I  10.0  I   1.8  I   0.5  I   4.9  I   1.4  I
                   -I--------I--------I--------I--------I--------I
                1.  I   725  I   102  I    35  I   406  I    61  I   1329
  AGREE             I  54.6  I   7.7  I   2.6  I  30.5  I   4.6  I   19.0
                    I  18.1  I  17.1  I  24.8  I  22.9  I  12.7  I
                    I  10.4  I   1.5  I   0.5  I   5.8  I   0.9  I
                   -I--------I--------I--------I--------I--------I
                2.  I   344  I    16  I     9  I   230  I    22  I    621
  STRONGLY AGREE    I  55.4  I   2.6  I   1.4  I  37.0  I   3.5  I    8.9
                    I   8.6  I   2.7  I   6.4  I  13.0  I   4.6  I
                    I   4.9  I   0.2  I   0.1  I   3.3  I   0.3  I
                   -I--------I--------I--------I--------I--------I
            COLUMN     3997      598      141     1773      479     6988
             TOTAL     57.2      8.6      2.0     25.4      6.9    100.0

CHI SQUARE =   161.87123 WITH  16 DEGREES OF FREEDOM   SIGNIFICANCE =  0.0
PEARSON'S R = 0.05909  SIGNIFICANCE =  0.0000

NUMBER OF MISSING OBSERVATIONS =     1106
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CLR USER QUESTIONNAIRE: LIBRARY TYPE COMPARISON XTABS                                 08/05/82        PAGE   65

FILE   FINAL    (CREATION DATE = 08/03/82)

* * * * * * * * * * * *  C R O S S T A B U L A T I O N  * * * * * * * * * * * *
   RQUEST43 (TABULATING     1) WHEN I USE THE COMPUTER CATALOG TERMINAL
BY LIBTYPE  LIBRARY GROUPING BY TYPE OF LIBRARY
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * PAGE   1 OF   1

                       LIBTYPE

                COUNT  IA.R.L. L OTHER AC COMMUNIT PUBLIC    STATE AN
              ROW PCT  IIBS      ADEMIC   Y COLLEG           D FEDERA   ROW
              COL PCT  I                  E                  L          TOTAL
                       I     1  I     2  I     3  I     4  I     5  I
RQUEST43      --------I--------I--------I--------I--------I--------I
           RQ43A       I   391  I    77  I    14  I   239  I    63  I    784
  KEYBOARD CONFUSING   I  49.9  I   9.8  I   1.8  I  30.5  I   8.0  I   11.0
                       I   9.8  I  12.2  I   9.9  I  12.8  I  12.8  I
                       I--------I--------I--------I--------I--------I
           RQ43B       I   334  I    36  I     6  I   131  I    50  I    557
  GLARE ON SCREEN      I  60.0  I   6.5  I   1.1  I  23.5  I   9.0  I    7.8
                       I   8.4  I   5.7  I   4.2  I   7.0  I  10.1  I
                       I--------I--------I--------I--------I--------I
           RQ43C       I  3527  I   582  I   135  I  1741  I   452  I   6437
  LETTERS EASY TO READ I  54.8  I   9.0  I   2.1  I  27.0  I   7.0  I   90.3
                       I  88.5  I  91.9  I  95.1  I  93.1  I  91.5  I
                       I--------I--------I--------I--------I--------I
           RQ43D       I   362  I    43  I    11  I   119  I    37  I    572
  LIGHTING TOO BRIGHT  I  63.3  I   7.5  I   1.9  I  20.8  I   6.5  I    8.0
                       I   9.1  I   6.8  I   7.7  I   6.4  I   7.5  I
                       I--------I--------I--------I--------I--------I
           RQ43E       I  2599  I   445  I    81  I  1271  I   269  I   4665
  WRITING SPACE OK     I  55.7  I   9.5  I   1.7  I  27.2  I   5.8  I   65.5
                       I  65.2  I  70.3  I  57.0  I  67.9  I  54.5  I
                       I--------I--------I--------I--------I--------I
           RQ43F       I   465  I    94  I    21  I   179  I    45  I    804
  NOISE DISTRACTING    I  57.8  I  11.7  I   2.6  I  22.3  I   5.6  I   11.3
                       I  11.7  I  14.8  I  14.8  I   9.6  I   9.1  I
                       I--------I--------I--------I--------I--------I
           RQ43G       I   343  I    52  I    16  I   162  I    24  I    597
  TABLE HEIGHT RIGHT   I  57.5  I   8.7  I   2.7  I  27.1  I   4.0  I    8.4
                       I   8.6  I   8.2  I  11.3  I   8.7  I   4.9  I
                       I--------I--------I--------I--------I--------I
           RQ43H       I   728  I    28  I    97  I   189  I   420  I   1462
  PRINTER EASY TO USE  I  49.8  I   1.9  I   6.6  I  12.9  I  28.7  I   20.5
                       I  18.3  I   4.4  I  68.3  I  10.1  I  85.0  I
                       I--------I--------I--------I--------I--------I
               COLUMN     3987      633      142     1871      494     7127
                TOTAL     55.9      8.9      2.0     26.3      6.9    100.0

PERCENTS AND TOTALS BASED ON RESPONDENTS

   7127 VALID CASES          967 MISSING CASES
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CLR USER QUESTIONNAIRE: LIBRARY TYPE COMPARISON XTABS                              08/05/82        PAGE   66

FILE   FINAL    (CREATION DATE = 08/03/82)

* * * * * * * * * * * *  C R O S S T A B U L A T I O N  * * * * * * * * * * * *
   RQUEST44 (TABULATING      1) ADDITIONAL SYSTEM FEATURES DESIRED:
BY LIBTYPE  LIBRARY GROUPING BY TYPE OF LIBRARY
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * PAGE   1 OF   2

                         LIBTYPE

                 COUNT  IA.R.L. L OTHER AC COMMUNIT PUBLIC      STATE AN
               ROW PCT  IIBS      ADEMIC   Y COLLEG             D FEDERA    ROW
               COL PCT  I                  E                    L           TOTAL
                        I       1 I      2 I      3 I      4 I      5 I
RQUEST44       --------I--------I--------I--------I--------I--------I
           RQ44A        I   725  I   186  I    20  I   637  I   142  I   1710
  STEP BY STEP INSTRUC  I  42.4  I  10.9  I   1.2  I  37.3  I   8.3  I   23.6
                        I  17.6  I  28.8  I  13.6  I  33.9  I  29.9  I
                        I--------I--------I--------I--------I--------I
           RQ44B        I   646  I   141  I    28  I   469  I     0  I   1284
  SEARCH BY TITLE WORD  I  50.3  I  11.0  I   2.2  I  36.5  I   0.0  I   17.7
                        I  15.7  I  21.9  I  19.0  I  25.0  I   0.0  I
                        I--------I--------I--------I--------I--------I
           RQ44C        I   960  I   183  I    41  I   576  I     1  I   1761
  SUBJECT WORD SEARCH   I  54.5  I  10.4  I   2.3  I  32.7  I   0.1  I   24.3
                        I  23.4  I  28.4  I  27.9  I  30.7  I   0.2  I
                        I--------I--------I--------I--------I--------I
           RQ44D        I   537  I    75  I    13  I   185  I     0  I    810
  LIMIT BY DATE OF PUB  I  66.3  I   9.3  I   1.6  I  22.8  I   0.0  I   11.2
                        I  13.1  I  11.6  I   8.8  I   9.8  I   0.0  I
                        I--------I--------I--------I--------I--------I
           RQ44E        I   572  I    30  I     3  I    66  I     1  I    672
  LIMIT BY LANGUAGE     I  85.1  I   4.5  I   0.4  I   9.8  I   0.1  I    9.3
                        I  13.9  I   4.7  I   2.0  I   3.5  I   0.2  I
                        I--------I--------I--------I--------I--------I
           RQ44F        I  1016  I   126  I    17  I   183  I    73  I   1415
  JOURNAL TITLE ABBRV   I  71.8  I   8.9  I   1.2  I  12.9  I   5.2  I   19.5
                        I  24.7  I  19.5  I  11.6  I   9.7  I  15.4  I
                        I--------I--------I--------I--------I--------I
           RQ44G        I   450  I    73  I    15  I   241  I    59  I    838
  CHANGE DISPLAY ORDER  I  53.7  I   8.7  I   1.8  I  28.8  I   7.0  I   11.5
                        I  10.9  I  11.3  I  10.2  I  12.8  I  12.4  I
                        I--------I--------I--------I--------I--------I
           RQ44H        I  1960  I   265  I    69  I   737  I   199  I   3230
  VIEW RELATED WORDS    I  60.7  I   8.2  I   2.1  I  22.8  I   6.2  I   44.5
                        I  47.7  I  41.1  I  46.9  I  39.2  I  41.9  I
                        I--------I--------I--------I--------I--------I
                COLUMN     4110      645      147     1879      475      7256
                 TOTAL     56.6      8.9      2.0     25.9      6.5     100.0

 PERCENTS AND TOTALS BASED ON RESPONDENTS

 (CONTINUED)
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CLR USER QUESTIONNAIRE: LIBRARY TYPE COMPARISON XTABS                                08/05/82        PAGE   67

FILE    FINAL    (CREATION DATE = 08/03/82)

* * * * * * * * * * * *  C R O S S T A B U L A T I O N  * * * * * * * * * * * *
   RQUEST44 (TABULATING     1) ADDITIONAL SYSTEM FEATURES DESIRED:
BY LIBTYPE  LIBRARY GROUPING BY TYPE OF LIBRARY
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * PAGE   2 OF   2

                      LIBTYPE

                COUNT  IA.R.L. L OTHER AC COMMUNIT PUBLIC    STATE AN
              ROW PCT  IIBS      ADEMIC   Y COLLEG           D FEDERA    ROW
              COL PCT  I                  E                  L          TOTAL
                       I     1  I     2  I     3  I     4  I     5  I
RQUEST44       --------I--------I--------I--------I--------I--------I
              RQ44I    I   767  I   102  I    26  I   279  I    86  I   1260
  SRCH FOR ILLUS & BIB I  60.9  I   8.1  I   2.1  I  22.1  I   6.8  I   17.4
                       I  18.7  I  15.8  I  17.7  I  14.8  I  18.1  I
                       I--------I--------I--------I--------I--------I
              RQ44J    I   428  I    64  I     8  I    67  I    43  I    610
  SRCH BY CALL NUMBER  I  70.2  I  10.5  I   1.3  I  11.0  I   7.0  I    8.4
                       I  10.4  I   9.9  I   5.4  I   3.6  I   9.1  I
                       I--------I--------I--------I--------I--------I
              RQ44K    I  1088  I   168  I    41  I   512  I     1  I   1810
  PRINT SEARCH RESULTS I  60.1  I   9.3  I   2.3  I  28.3  I   0.1  I   24.9
                       I  26.5  I  26.0  I  27.9  I  27.2  I   0.2  I
                       I--------I--------I--------I--------I--------I
              RQ44L    I  1814  I   282  I    57  I   663  I   222  I   3038
  SRCH CONTENTS-INDEX  I  59.7  I   9.3  I   1.9  I  21.8  I   7.3  I   41.9
                       I  44.1  I  43.7  I  38.8  I  35.3  I  46.7  I
                       I--------I--------I--------I--------I--------I
              RQ44M    I  1019  I   301  I    27  I   349  I   210  I   1906
  IF BOOK CHECKED OUT  I  53.5  I  15.8  I   1.4  I  18.3  I  11.0  I   26.3
                       I  24.8  I  46.7  I  18.4  I  18.6  I  44.2  I
                       I--------I--------I--------I--------I--------I
              RQ44N    I   530  I   152  I    17  I   260  I   139  I   1098
  LIB LOCATION OF BOOK I  48.3  I  13.8  I   1.5  I  23.7  I  12.7  I   15.1
                       I  12.9  I  23.6  I  11.6  I  13.8  I  29.3  I
                       I--------I--------I--------I--------I--------I
              RQ44O    I   200  I    19  I    30  I    85  I    17  I    351
  NONE                 I  57.0  I   5.4  I   8.5  I  24.2  I   4.8  I    4.8
                       I   4.9  I   2.9  I  20.4  I   4.5  I   3.6  I
                       I--------I--------I--------I--------I--------I
               COLUMN      4110      645      147     1879      475     7256
                TOTAL      56.6      8.9      2.0     25.9      6.5    100.0

PERCENTS AND TOTALS BASED ON RESPONDENTS

   7256 VALID CASES          838 MISSING CASES
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CLR USER QUESTIONNAIRE: LIBRARY TYPE COMPARISON XTABS                                08/05/82         PAGE   68

FILE   FINAL    (CREATION DATE = 08/03/82)

* * * * * * * * * * * *  C R O S S T A B U L A T I O N  * * * * * * * * * * * *
   RQUEST45 (TABULATING     1) COMPUTER CAT SERVICE IMPROVEMENTS DESIRE
BY LIBTYPE  LIBRARY GROUPING BY TYPE OF LIBRARY
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * PAGE   1 OF   2

                           LIBTYPE

                   COUNT  IA.R.L. L OTHER AC COMMUNIT PUBLIC    STATE AN
                 ROW PCT  IIBS      ADEMIC   Y COLLEG           D FEDERA    ROW
                 COL PCT  I                  E                  L          TOTAL
                          I       1 I      2 I      3 I      4 I      5 I
RQUEST45          --------I--------I--------I--------I--------I--------I
           RQ45A          I   2022 I    323 I     81 I   1019 I    245 I    3690
  MORE TERMINALS          I   54.8 I    8.8 I    2.2 I   27.6 I    6.6 I    50.8
                          I   48.9 I   50.4 I   55.9 I   54.8 I   51.4 I
                          I--------I--------I--------I--------I--------I
           RQ45B          I   1547 I    140 I     38 I    423 I    132 I    2280
  TERMS IN OTHER LOCAT    I   67.9 I    6.1 I    1.7 I   18.6 I    5.8 I    31.4
                          I   37.4 I   21.8 I   26.2 I   22.7 I   27.7 I
                          I--------I--------I--------I--------I--------I
           RQ45C          I   1712 I    258 I     39 I    374 I    150 I    2533
  TERMS OUTSIDE LIBR      I   67.6 I   10.2 I    1.5 I   14.8 I    5.9 I    34.9
                          I   41.4 I   40.2 I   26.9 I   20.1 I   31.4 I
                          I--------I--------I--------I--------I--------I
           RQ45D          I   1161 I    172 I     26 I    616 I    135 I    2110
  COMMAND CHART POSTED    I   55.0 I    8.2 I    1.2 I   29.2 I    6.4 I    29.1
                          I   28.1 I   26.8 I   17.9 I   33.1 I   28.3 I
                          I--------I--------I--------I--------I--------I
           RQ45E          I    776 I    121 I     15 I    551 I      0 I    1463
  MANUAL AT TERMINAL      I   53.0 I    8.3 I    1.0 I   37.7 I    0.0 I    20.1
                          I   18.8 I   18.9 I   10.3 I   29.6 I    0.0 I
                          I--------I--------I--------I--------I--------I
           RQ45F          I    307 I     53 I      8 I    155 I     85 I     608
  MANUAL FOR PURCHASE     I   50.5 I    8.7 I    1.3 I   25.5 I   14.0 I     8.4
                          I    7.4 I    8.3 I    5.5 I    8.3 I   17.8 I
                          I--------I--------I--------I--------I--------I
           RQ45G          I    474 I    112 I     17 I    277 I    125 I    1005
  TRAINING SESSIONS       I   47.2 I   11.1 I    1.7 I   27.6 I   12.4 I    13.8
                          I   11.5 I   17.5 I   11.7 I   14.9 I   26.2 I
                          I--------I--------I--------I--------I--------I
           RQ45H          I    392 I     77 I     17 I    247 I     73 I     806
  A-V TRAINING PROGR      I   48.6 I    9.6 I    2.1 I   30.6 I    9.1 I    11.1
                          I    9.5 I   12.0 I   11.7 I   13.3 I   15.3 I
                          I--------I--------I--------I--------I--------I
                  COLUMN      4138      641      145     1860      477      7261
                   TOTAL      57.0      8.8      2.0     25.6      6.6     100.0

PERCENTS AND TOTALS BASED ON RESPONDENTS

(CONTINUED)
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FILE   FINAL    (CREATION DATE = 08/03/82)

* * * * * * * * * * * *  C R O S S T A B U L A T I O N  * * * * * * * * * * * *
   RQUEST45 (TABULATING     1) COMPUTER CAT SERVICE IMPROVEMENTS DESIRE
BY LIBTYPE  LIBRARY GROUPING BY TYPE OF LIBRARY
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * PAGE   2 OF   2

                      LIBTYPE

              COUNT  IA.R.L. L OTHER AC COMMUNIT PUBLIC   STATE AN
            ROW PCT  IIBS      ADEMIC   Y COLLEG          D FEDERA   ROW
            COL PCT  I                  E                 L          TOTAL
                     I      1  I     2  I     3  I     4  I     5  I
RQUEST45    --------I--------I--------I--------I--------I--------I
            RQ451    I   620  I   113  I    32  I   320  I    77  I   1162
  NONE               I  53.4  I   9.7  I   2.8  I  27.5  I   6.6  I   16.0
                     I  15.0  I  17.6  I  22.1  I  17.2  I  16.1  I
                     I--------I--------I--------I--------I--------I
             COLUMN     4138      641      145     1860      477     7261
              TOTAL     57.0      8.8      2.0     25.6      6.6    100.0

PERCENTS AND TOTALS BASED ON RESPONDENTS

   7261 VALID CASES         833 MISSING CASES
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FILE   FINAL    (CREATION DATE = 08/03/82)

* * * * * * * * * * * *  C R O S S T A B U L A T I O N  * * * * * * * * * * * *
   RQUEST46 (TABULATING     1) ADDITIONAL KINDS OF MATERIALS DESIRED:
BY LIBTYPE  LIBRARY GROUPING BY TYPE OF LIBRARY
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * PAGE   1 OF   2

                      LIBTYPE

                COUNT  IA.R.L. L OTHER AC COMMUNIT PUBLIC    STATE AN
              ROW PCT  IIBS      ADEMIC   Y COLLEG           D FEDERA   ROW
              COL PCT  I                  E                  L          TOTAL
                       I      1  I     2  I     3  I     4  I     5  I
RQUEST46       --------I--------I--------I--------I--------I--------I
           RQ46A       I    869 I     66 I     10 I    134 I    207 I   1286
  DISSERTATIONS        I   67.6 I    5.1 I    0.8 I   10.4 I   16.1 I   21.0
                       I   23.1 I   15.4 I    6.9 I   10.1 I   46.0 I
                       I--------I--------I--------I--------I--------I
           RQ46B       I    530 I     98 I     35 I    137 I     76 I    876
  MOTION PICTURE FILMS I   60.5 I   11.2 I    4.0 I   15.6 I    8.7 I   14.3
                       I   14.1 I   22.9 I   24.3 I   10.3 I   16.9 I
                       I--------I--------I--------I--------I--------I
           RQ46C       I   1290 I     96 I     28 I    315 I      0 I   1729
  GOV PUBLICATIONS     I   74.6 I    5.6 I    1.6 I   18.2 I    0.0 I   28.3
                       I   34.2 I   22.4 I   19.4 I   23.8 I    0.0 I
                       I--------I--------I--------I--------I--------I
           RQ46D       I    634 I    232 I     73 I    453 I      0 I   1392
  JOURNAL TITLES       I   45.5 I   16.7 I    5.2 I   32.5 I    0.0 I   22.8
                       I   16.8 I   54.2 I   50.7 I   34.2 I    0.0 I
                       I--------I--------I--------I--------I--------I
           RQ46E       I    503 I     63 I     18 I    281 I      0 I    865
  MAPS                 I   58.2 I    7.3 I    2.1 I   32.5 I    0.0 I   14.1
                       I   13.3 I   14.7 I   12.5 I   21.2 I    0.0 I
                       I--------I--------I--------I--------I--------I
           RQ46F       I    335 I     19 I     10 I     96 I     63 I    523
  MANUSCRIPTS          I   64.1 I    3.6 I    1.9 I   18.4 I   12.0 I    8.5
                       I    8.9 I    4.4 I    6.9 I    7.2 I   14.0 I
                       I--------I--------I--------I--------I--------I
           RQ46G       I    309 I     41 I     24 I     83 I     22 I    479
  MUSIC SCORES         I   64.5 I    8.6 I    5.0 I   17.3 I    4.6 I    7.8
                       I    8.2 I    9.6 I   16.7 I    6.3 I    4.9 I
                       I--------I--------I--------I--------I--------I
           RQ46H       I   1182 I    142 I     43 I    260 I    175 I   1802
  NEWSPAPERS           I   65.6 I    7.9 I    2.4 I   14.4 I    9.7 I   29.5
                       I   31.4 I   33.2 I   29.9 I   19.6 I   38.9 I
                       I--------I--------I--------I--------I--------I
               COLUMN      3769      428      144     1326      450     6117
                TOTAL      61.6      7.0      2.4     21.7      7.4    100.0

PERCENTS AND TOTALS BASED ON RESPONDENTS

(CONTINUED)
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CLR USER QUESTIONNAIRE: LIBRARY TYPE COMPARISON XTABS                                    08/05/82        PAGE   71

FILE   FINAL    (CREATION DATE = 08/03/82)

* * * * * * * * * * * *  C R O S S T A B U L A T I O N  * * * * * * * * * * * *
   RQUEST46 (TABULATING     1) ADDITIONAL KINDS OF MATERIALS DESIRED:
BY LIBTYPE  LIBRARY GROUPING BY TYPE OF LIBRARY
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * PAGE   2 OF   2

                     LIBTYPE

               COUNT  IA.R.L. L OTHER AC COMMUNIT PUBLIC    STATE AN
              ROW PCT IIBS      ADEMIC   Y COLLEG           D FEDERA   ROW
              COL PCT I                  E                  L          TOTAL
                      I     1  I     2  I     3  I     4  I     5  I
RQUEST46      --------I--------I--------I--------I--------I--------I
          RQ46I       I   716  I    55  I    32  I   411  I    33  I   1247
  RECORDS OR TAPES    I  57.4  I   4.4  I   2.6  I  33.0  I   2.6  I   20.4
                      I  19.0  I  12.9  I  22.2  I  31.0  I   7.3  I
                      I--------I--------I--------I--------I--------I
          RQ46J       I   727  I    64  I    26  I   190  I    96  I   1103
  TECHNICAL REPORTS   I  65.9  I   5.8  I   2.4  I  17.2  I   8.7  I   18.0
                      I  19.3  I  15.0  I  18.1  I  14.3  I  21.3  I
                      I--------I--------I--------I--------I--------I
          RQ46K       I  1220  I    89  I    24  I    54  I   180  I   1567
  MORE OLDER BOOKS    I  77.9  I   5.7  I   1.5  I   3.4  I  11.5  I   25.6
                      I  32.4  I  20.8  I  16.7  I   4.1  I  40.0  I
                      I--------I--------I--------I--------I--------I
          RQ46L       I   360  I    58  I    19  I   203  I    32  I    672
  NONE                I  53.6  I   8.6  I   2.8  I  30.2  I   4.8  I   11.0
                      I   9.6  I  13.6  I  13.2  I  15.3  I   7.1  I
                      I--------I--------I--------I--------I--------I
          RQ46M       I   114  I    12  I     6  I    81  I    19  I    232
  OTHER               I  49.1  I   5.2  I   2.6  I  34.9  I   8.2  I    3.8
                      I   3.0  I   2.8  I   4.2  I   6.1  I   4.2  I
                      I--------I--------I--------I--------I--------I
               COLUMN     3769      428      144     1326      450      6117
                TOTAL     61.6      7.0      2.4     21.7      7.4     100.0

PERCENTS AND TOTALS BASED ON RESPONDENTS

   6117 VALID CASES        1977 MISSING CASES
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CLR USER QUESTIONNAIRE: LIBRARY TYPE COMPARISON XTABS                                  08/05/82        PAGE   73

FILE   FINAL    (CREATION DATE = 08/03/82)

* * * * * * * * * * * * * * * * * * * *   C R O S S T A B U L A T I O N   O F   * * * * * * * * * * * * * * * * * * * *
   RQ48      I COME TO THIS LIBRARY                            BY  LIBTYPE   LIBRARY GROUPING BY TYPE OF LIBRARY
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *  PAGE  1 OF  1

                        LIBTYPE
                COUNT  I
               ROW PCT IA.R.L. L OTHER AC COMMUNIT PUBLIC    STATE AN   ROW
               COL PCT IIBS      ADEMIC   Y COLLEG           D FEDERA  TOTAL
               TOT PCT I      1.I      2.I      3.I      4.I      5.I
RQ48           --------I--------I--------I--------I--------I--------I
                    1. I  1542  I   199  I    44  I    82  I    54  I   1921
  DAILY                I  80.3  I  10.4  I   2.3  I   4.3  I   2.8  I   25.8
                       I  36.6  I  30.6  I  29.9  I   4.2  I  10.8  I
                       I  20.7  I   2.7  I   0.6  I   1.1  I   0.7  I
                      -I--------I--------I--------I--------I--------I
                    2. I  1810  I   341  I    69  I   804  I   139  I   3163
  WEEKLY               I  57.2  I  10.8  I   2.2  I  25.4  I   4.4  I   42.4
                       I  42.9  I  52.5  I  46.9  I  41.5  I  27.7  I
                       I  24.3  I   4.6  I   0.9  I  10.8  I   1.9  I
                      -I--------I--------I--------I--------I--------I
                    3. I   515  I    69  I    27  I   652  I   111  I   1374
  MONTHLY              I  37.5  I   5.0  I   2.0  I  47.5  I   8.1  I   18.4
                       I  12.2  I  10.6  I  18.4  I  33.6  I  22.2  I
                       I   6.9  I   0.9  I   0.4  I   8.7  I   1.5  I
                      -I--------I--------I--------I--------I--------I
                    4. I   202  I    29  I     5  I   231  I    83  I    550
  4 TIMES YEAR         I  36.7  I   5.3  I   0.9  I  42.0  I  15.1  I    7.4
                       I   4.8  I   4.5  I   3.4  I  11.9  I  16.6  I
                       I   2.7  I   0.4  I   0.1  I   3.1  I   1.1  I
                      -I--------I--------I--------I--------I--------I
                    5. I    51  I     3  I     0  I    33  I    36  I    123
  ONCE A  YEAR         I  41.5  I   2.4  I   0.0  I  26.8  I  29.3  I    1.7
                       I   1.2  I   0.5  I   0.0  I   1.7  I   7.2  I
                       I   0.7  I   0.0  I   0.0  I   0.4  I   0.5  I
                      -I--------I--------I--------I--------I--------I
                    6. I    96  I     9  I     2  I   136  I    78  I    321
  NOT BEFORE TODAY     I  29.9  I   2.8  I   0.6  I  42.4  I  24.3  I    4.3
                       I   2.3  I   1.4  I   1.4  I   7.0  I  15.6  I
                       I   1.3  I   0.1  I   0.0  I   1.8  I   1.0  I
                      -I--------I--------I--------I--------I--------I
                COLUMN    4216      650      147     1938      501     7452
                 TOTAL    56.6      8.7      2.0     26.0      6.7    100.0

    1 OUT OF    30 (  3.3%) OF THE VALID CELLS HAVE EXPECTED CELL FREQUENCY LESS THAN 5.0.
MINIMUM EXPECTED CELL FREQUENCY =  2.426
CHI SQUARE =  1492.45752 WITH  20 DEGREES OF FREEDOM   SIGNIFICANCE =  0.0
PEARSON'S R = 0.36929  SIGNIFICANCE =  0.0000

NUMBER OF MISSING OBSERVATIONS =      642
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CLR USER QUESTIONNAIRE: LIBRARY TYPE COMPARISON XTABS                               08/05/82       PAGE   74

FILE   FINAL    (CREATION DATE = 08/03/82)

* * * * * * * * * * * * * * * * * * *  C R O S S T A B U L A T I O N   O F  * * * * * * * * * * * * * * * * * * *
   RQ49      I USE THIS COMPUTER CATALOG                          BY  LIBTYPE   LIBRARY GROUPING BY TYPE OF LIBRARY
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *  PAGE  1 OF  1

                   LIBTYPE
           COUNT  I
         ROW PCT  IA.R.L. L OTHER AC COMMUNIT PUBLIC   STATE AN  ROW
         COL PCT  IIBS      ADEMIC   Y COLLEG          D FEDERA  TOTAL
         TOT PCT  I     1.I     2.I     3.I     4.I     5.I
RQ49     --------I--------I--------I--------I--------I--------I
              1.  I   719  I    72  I    26  I   619  I   137  I   1573
  EVERY   VISIT   I  45.7  I   4.6  I   1.7  I  39.4  I   8.7  I   21.1
                  I  17.0  I  11.1  I  17.7  I  31.9  I  27.3  I
                  I   9.6  I   1.0  I   0.3  I   8.3  I   1.8  I
                 -I--------I--------I--------I--------I--------I
              2.  I  1691  I   233  I    52  I   621  I   156  I   2753
  MOST    VISITS  I  61.4  I   8.5  I   1.9  I  22.6  I   5.7  I   36.9
                  I  40.0  I  35.8  I  35.4  I  32.0  I  31.1  I
                  I  22.6  I   3.1  I   0.7  I   8.3  I   2.1  I
                 -I--------I--------I--------I--------I--------I
              3.  I  1303  I   236  I    59  I   332  I    68  I   1998
  OCCASIONALLY    I  65.2  I  11.8  I   3.0  I  16.6  I   3.4  I   26.8
                  I  30.8  I  36.3  I  40.1  I  17.1  I  13.5  I
                  I  17.5  I   3.2  I   0.8  I   4.4  I   0.9  I
                 -I--------I--------I--------I--------I--------I
              4.  I   253  I    48  I     2  I    80  I    25  I    408
  RARELY          I  62.0  I  11.8  I   0.5  I  19.6  I   6.1  I    5.5
                  I   6.0  I   7.4  I   1.4  I   4.1  I   5.0  I
                  I   3.4  I   0.6  I   0.0  I   1.1  I   0.3  I
                 -I--------I--------I--------I--------I--------I
              5.  I   260  I    61  I     8  I   290  I   116  I    735
  NOT BEFORE TODAY I  35.4  I   8.3  I   1.1  I  39.5  I  15.8  I    9.8
                  I   6.2  I   9.4  I   5.4  I  14.9  I  23.1  I
                  I   3.5  I   0.8  I   0.1  I   3.9  I   1.6  I
                 -I--------I--------I--------I--------I--------I
          COLUMN     4226      650      147     1942      502     7467
           TOTAL     56.6      8.7      2.0     26.0      6.7    100.0

CHI SQUARE =    588.98218 WITH  16 DEGREES OF FREEDOM   SIGNIFICANCE =  0.0
PEARSON'S R = 0.00455  SIGNIFICANCE =  0.3471

NUMBER OF MISSING OBSERVATIONS =      627
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CLR USER QUESTIONNAIRE: LIBRARY TYPE COMPARISON XTABS                                    08/05/82        PAGE   75

FILE   FINAL    (CREATION DATE = 08/03/82)

* * * * * * * * * * * * * * * * * * * * *   C R O S S T A B U L A T I O N   O F   * * * * * * * * * * * * * * * * *
   RQ50      I USE LIB'S BK CRD OR MICRO CAT                  BY  LIBTYPE   LIBRARY GROUPING BY TYPE OF LIBRARY
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *  PAGE  1 OF  1

                   LIBTYPE
           COUNT  I
         ROW PCT  IA.R.L. L OTHER AC COMMUNIT PUBLIC    STATE AN   ROW
         COL PCT  IIBS      ADEMIC   Y COLLEG           D FEDERA   TOTAL
         TOT PCT  I      1.I      2.I      3.I      4.I      5.I
RQ50     ---------I--------I--------I--------I--------I--------I
              1.  I   442  I    55  I     5  I   243  I   125  I    870
  EVERY   VISIT   I  50.8  I   6.3  I   0.6  I  27.9  I  14.4  I   12.4
                  I  10.5  I   8.5  I   3.4  I  15.8  I  25.5  I
                  I   6.3  I   0.8  I   0.1  I   3.5  I   1.8  I
                 -I--------I--------I--------I--------I--------I
              2.  I   872  I   123  I    11  I   366  I   120  I   1492
  MOST    VISITS  I  58.4  I   8.2  I   0.7  I  24.5  I   8.0  I   21.2
                  I  20.7  I  19.0  I   7.5  I  23.9  I  24.4  I
                  I  12.4  I   1.8  I   0.2  I   5.2  I   1.7  I
                 -I--------I--------I--------I--------I--------I
              3.  I  1575  I   243  I    49  I   449  I   102  I   2418
  OCCASIONALLY    I  65.1  I  10.0  I   2.0  I  18.6  I   4.2  I   34.4
                  I  37.5  I  37.5  I  33.3  I  29.3  I  20.8  I
                  I  22.4  I   3.5  I   0.7  I   6.4  I   1.5  I
                 -I--------I--------I--------I--------I--------I
              4.  I   937  I   173  I    42  I   272  I    71  I   1495
  RARELY          I  62.7  I  11.6  I   2.8  I  18.2  I   4.7  I   21.3
                  I  22.3  I  26.7  I  28.6  I  17.7  I  14.5  I
                  I  13.3  I   2.5  I   0.6  I   3.9  I   1.0  I
                 -I--------I--------I--------I--------I--------I
              5.  I   379  I    54  I    40  I   204  I    73  I    750
  NOT BEFORE TODAY I  50.5  I   7.2  I   5.3  I  27.2  I   9.7  I   10.7
                  I   9.0  I   8.3  I  27.2  I  13.3  I  14.9  I
                  I   5.4  I   0.8  I   0.6  I   2.9  I   1.0  I
                 -I--------I--------I--------I--------I--------I
          COLUMN     4205      648      147     1534      491     7025
           TOTAL     59.9      9.2      2.1     21.8      7.0    100.0

CHI SQUARE =   290.19116 WITH  16 DEGREES OF FREEDOM   SIGNIFICANCE =  0.0
PEARSON'S R =-0.05267  SIGNIFICANCE =  0.0000

NUMBER OF MISSING OBSERVATIONS =     1069
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CLR USER QUESTIONNAIRE: LIBRARY TYPE COMPARISON XTABS                                    08/05/82        PAGE   76

FILE   FINAL    (CREATION DATE = 08/03/82)

* * * * * * * * * * * * * * * * * * *  C R O S S T A B U L A T I O N   O F  * * * * * * * * * * * * * * * * * * *
   RQ51      I USE ANOTHER COMPUTER SYSTEM                        BY  LIBTYPE   LIBRARY GROUPING BY TYPE OF LIBRARY
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *  PAGE  1 OF  1

                    LIBTYPE
            COUNT  I
           ROW PCT IA.R.L. L OTHER AC COMMUNIT PUBLIC    STATE AN   ROW
           COL PCT IIBS      ADEMIC   Y COLLEG           D FEDERA  TOTAL
           TOT PCT I      1.I      2.I      3.I      4.I      5.I
RQ51       --------I--------I--------I--------I--------I--------I
                1. I   496  I    56  I    25  I   326  I    62  I    965
  DAILY            I  51.4  I   5.8  I   2.6  I  33.8  I   6.4  I   13.0
                   I  11.8  I   8.6  I  17.0  I  17.0  I  12.4  I
                   I   6.7  I   0.8  I   0.3  I   4.4  I   0.8  I
                  -I--------I--------I--------I--------I--------I
                2. I   784  I    99  I    21  I   258  I    78  I   1240
  WEEKLY           I  63.2  I   8.0  I   1.7  I  20.8  I   6.3  I   16.7
                   I  18.7  I  15.3  I  14.3  I  13.5  I  15.6  I
                   I  10.6  I   1.3  I   0.3  I   3.5  I   1.1  I
                  -I--------I--------I--------I--------I--------I
                3. I   580  I    80  I    19  I   224  I    61  I    964
  MONTHLY          I  60.2  I   8.3  I   2.0  I  23.2  I   6.3  I   13.0
                   I  13.8  I  12.3  I  12.9  I  11.7  I  12.2  I
                   I   7.8  I   1.1  I   0.3  I   3.0  I   0.8  I
                  -I--------I--------I--------I--------I--------I
                4. I   537  I    79  I     8  I   187  I    69  I    880
  4 TIMES A YEAR   I  61.0  I   9.0  I   0.9  I  21.3  I   7.8  I   11.9
                   I  12.8  I  12.2  I   5.4  I   9.8  I  13.8  I
                   I   7.2  I   1.1  I   0.1  I   2.5  I   0.9  I
                  -I--------I--------I--------I--------I--------I
                5. I   386  I    73  I     6  I   157  I    49  I    671
  ONCE A  YEAR     I  57.5  I  10.9  I   0.9  I  23.4  I   7.3  I    9.1
                   I   9.2  I  11.3  I   4.1  I   8.2  I   9.8  I
                   I   5.2  I   1.0  I   0.1  I   2.1  I   0.7  I
                  -I--------I--------I--------I--------I--------I
                6. I  1416  I   261  I    68  I   765  I   180  I   2690
  NEVER            I  52.6  I   9.7  I   2.5  I  28.4  I   6.7  I   36.3
                   I  33.7  I  40.3  I  46.3  I  39.9  I  36.1  I
                   I  19.1  I   3.5  I   0.9  I  10.3  I   2.4  I
                  -I--------I--------I--------I--------I--------I
            COLUMN    4199      648      147     1917      499     7410
             TOTAL    56.7      8.7      2.0     25.9      6.7    100.0

CHI SQUARE =   115.98837 WITH  20 DEGREES OF FREEDOM   SIGNIFICANCE =  0.0000
PEARSON'S R = 0.02087  SIGNIFICANCE =  0.0362

NUMBER OF MISSING OBSERVATIONS =     684
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CLR USER QUESTIONNAIRE: LIBRARY TYPE COMPARISON XTABS                                  08/05/82        PAGE   77

FILE    FINAL    (CREATION DATE = 08/03/82)

* * * * * * * * * * * * * * * * * * *   C R O S S T A B U L A T I O N   O F   * * * * * * * * * * * * * * * * * * *
    RQ52      HEARD ABOUT COMPUTER CAT FROM                    BY  LIBTYPE   LIBRARY GROUPING BY TYPE OF LIBRARY
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *  PAGE  1 OF  1

                   LIBTYPE
           COUNT  I
         ROW PCT  IA.R.L. L OTHER AC COMMUNIT PUBLIC    STATE AN  ROW
         COL PCT  IIBS       ADEMIC   Y COLLEG          D FEDERA  TOTAL
         TOT PCT  I       1.I       2.I       3.I       4.I       5.I
RQ52     --------I--------I--------I--------I--------I--------I
              1.  I  2756  I   279  I    91  I  1329  I   236  I  4691
  NOTICED TERM IN I  58.8  I   5.9  I   1.9  I  28.3  I   5.0  I  63.6
                  I  66.0  I  43.5  I  62.3  I  69.5  I  47.0  I
                  I  37.4  I   3.8  I   1.2  I  18.0  I   3.2  I
                 -I--------I--------I--------I--------I--------I
              2.  I   524  I   112  I    19  I    62  I    33  I   750
  LIBRARY TOUR    I  69.9  I  14.9  I   2.5  I   8.3  I   4.4  I  10.2
                  I  12.6  I  17.5  I  13.0  I   3.2  I   6.6  I
                  I   7.1  I   1.5  I   0.3  I   0.8  I   0.4  I
                 -I--------I--------I--------I--------I--------I
              3.  I   114  I    14  I     3  I   133  I    12  I   276
  ARTICLE-ANNOUNCE I  41.3  I   5.1  I   1.1  I  48.2  I   4.3  I   3.7
                  I   2.7  I   2.2  I   2.1  I   7.0  I   2.4  I
                  I   1.5  I   0.2  I   0.0  I   1.8  I   0.2  I
                 -I--------I--------I--------I--------I--------I
              4.  I   192  I    61  I    13  I    18  I    23  I   307
  INSTRUCTOR      I  62.5  I  19.9  I   4.2  I   5.9  I   7.5  I   4.2
                  I   4.6  I   9.5  I   8.9  I   0.9  I   4.6  I
                  I   2.6  I   0.8  I   0.2  I   0.2  I   0.3  I
                 -I--------I--------I--------I--------I--------I
              5.  I   324  I    65  I    11  I   178  I   110  I   688
  FRIEND - FAMILY I  47.1  I   9.4  I   1.6  I  25.9  I  16.0  I   9.3
                  I   7.8  I  10.1  I   7.5  I   9.3  I  21.9  I
                  I   4.4  I   0.9  I   0.1  I   2.4  I   1.5  I
                 -I--------I--------I--------I--------I--------I
              6.  I   265  I   110  I     9  I   193  I    88  I   665
  LIBRARY STAFF   I  39.8  I  16.5  I   1.4  I  29.0  I  13.2  I   9.0
                  I   6.3  I  17.2  I   6.2  I  10.1  I  17.5  I
                  I   3.6  I   1.5  I   0.1  I   2.6  I   1.2  I
                 -I--------I--------I--------I--------I--------I
          COLUMN     4175      641      146     1913      502     7377
           TOTAL     56.6      8.7      2.0     25.9      6.8    100.0

CHI SQUARE =   626.54492 WITH  20 DEGREES OF FREEDOM   SIGNIFICANCE =  0.0
PEARSON'S R = 0.09709  SIGNIFICANCE =  0.0000

NUMBER OF MISSING OBSERVATIONS =      717
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FILE   FINAL    (CREATION DATE = 08/03/82)

* * * * * * * * * * * *  C R O S S T A B U L A T I O N  * * * * * * * * * * * *
   RQUEST53 (TABULATING      1) I LEARNED HOW TO USE THIS COMP CAT:
BY LIBTYPE  LIBRARY GROUPING BY TYPE OF LIBRARY
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * PAGE   1 OF   1

                     LIBTYPE

             COUNT  IA.R.L. L OTHER AC COMMUNIT PUBLIC    STATE AN
           ROW PCT  IIBS      ADEMIC   Y COLLEG           D FEDERA  ROW
           COL PCT  I                  E                  L         TOTAL
                    I     1  I     2  I     3  I     4  I     5  I
RQUEST53   ---------I--------I--------I--------I--------I--------I
         RQ53A      I   631  I   119  I    20  I   313  I    68  I  1151
  FROM A FRIEND     I  54.8  I  10.3  I   1.7  I  27.2  I   5.9  I  15.5
                    I  15.0  I  18.4  I  13.6  I  16.4  I  13.5  I
                    I--------I--------I--------I--------I--------I
         RQ53B      I  2341  I   307  I    68  I   884  I   355  I  3955
  BY PRINTED INSTR  I  59.2  I   7.8  I   1.7  I  22.4  I   9.0  I  53.3
                    I  55.7  I  47.6  I  46.3  I  46.2  I  70.6  I
                    I--------I--------I--------I--------I--------I
         RQ53C      I  1352  I   192  I    65  I   426  I   112  I  2147
  BY INSTR ON TERMINAL I 63.0 I   8.9  I   3.0  I  19.8  I   5.2  I  29.0
                    I  32.2  I  29.8  I  44.2  I  22.3  I  22.3  I
                    I--------I--------I--------I--------I--------I
         RQ53D      I   858  I   275  I    59  I   733  I   268  I  2193
  FROM LIBRARY STAFF I  39.1 I  12.5  I   2.7  I  33.4  I  12.2  I  29.6
                    I  20.4  I  42.6  I  40.1  I  38.3  I  53.3  I
                    I--------I--------I--------I--------I--------I
         RQ53E      I   302  I    95  I    24  I    17  I    20  I   458
  FROM LIBRARY COURSE I 65.9 I  20.7  I   5.2  I   3.7  I   4.4  I   6.2
                    I   7.2  I  14.7  I  16.3  I   0.9  I   4.0  I
                    I--------I--------I--------I--------I--------I
         RQ53F      I     0  I     6  I     7  I     1  I     1  I    15
  AUDIO-VISUAL PROG I   0.0  I  40.0  I  46.7  I   6.7  I   6.7  I   0.2
                    I   0.0  I   0.9  I   4.8  I   0.1  I   0.2  I
                    I--------I--------I--------I--------I--------I
         RQ53G      I   876  I    99  I    33  I   399  I    59  I  1466
  BY MYSELF         I  59.8  I   6.8  I   2.3  I  27.2  I   4.0  I  19.8
                    I  20.8  I  15.3  I  22.4  I  20.8  I  11.7  I
                    I--------I--------I--------I--------I--------I
            COLUMN     4205      645      147     1914      503     7414
             TOTAL     56.7      8.7      2.0     25.8      6.8    100.0

PERCENTS AND TOTALS BASED ON RESPONDENTS

   7414 VALID CASES          680 MISSING CASES
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CLR USER QUESTIONNAIRE: LIBRARY TYPE COMPARISON XTABS                          08/05/82        PAGE   81

FILE   FINAL     (CREATION DATE = 08/03/82)

* * * * * * * * * * * * * * * * *   C R O S S T A B U L A T I O N   O F   * * * * * * * * * * * * * * * * *
    RQ54      MY AGE GROUP IS                                  BY  LIBTYPE   LIBRARY GROUPING BY TYPE OF LIBRARY
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * PAGE  1 OF  2

                    LIBTYPE
             COUNT I
           ROW PCT IA.R.L. L OTHER AC COMMUNIT PUBLIC     STATE AN   ROW
           COL PCT IIBS      ADEMIC   Y COLLEG            D FEDERA   TOTAL
           TOT PCT I       1.I      2.I      3.I      4.I      5.I
RQ54       --------I---------I--------I--------I--------I--------I
                1. I    27   I     1  I     1  I   102  I     3  I    134
  14 AND  UNDER    I  20.1   I   0.7  I   0.7  I  76.1  I   2.2  I    1.8
                   I   0.6   I   0.2  I   0.7  I   5.3  I   0.6  I
                   I   0.4   I   0.0  I   0.0  I   1.4  I   0.0  I
                  -I---------I--------I--------I--------I--------I
                2. I   832   I   120  I    48 .I   424  I    34  I   1458
  15 - 19 YEARS    I  57.1   I   8.2  I   3.3  I  29.1  I   2.3  I   19.6
                   I  19.7   I  18.5  I  32.7  I  22.0  I   6.7  I
                   I  11.2   I   1.6  I   0.6  I   5.7  I   0.5  I
                  -I---------I--------I--------I--------I--------I
                3. I  1886   I   339  I    66  I   360  I   162  I   2813
  20 - 24 YEARS    I  67.0   I  12.1  I   2.3  I  12.8  I   5.8  I   37.8
                   I  44.7   I  52.2  I  44.9  I  18.7  I  32.1  I
                   I  25.3   I   4.6  I   0.9  I   4.8  I   2.2  I
                  -I---------I--------I--------I--------I--------I
                4. I  1057   I   126  I    23  I   576  I   196  I   1978
  25 - 34 YEARS    I  53.4   I   6.4  I   1.2  I  29.1  I   9.9  I   26.6
                   I  25.1   I  19.4 .I  15.6  I  29.9  I  38.8  I
                   I  14.2   I   1.7 .I   0.3  I   7.7  I   2.6  I
                  -I---------I--------I--------I--------I--------I
                5. I   284   I    38  I     6  I   281  I    72  I    681
  35 - 44 YEARS    I  41.7   I   5.6  I   0.9  I  41.3  I  10.6  I    9.1
                   I   6.7   I   5.8  I   4.1  I  14.6  I  14.3  I
                   I   3.8   I   0.5  I   0.1  I   3.8  I   1.0  I
                  -I---------I--------I--------I--------I--------I
                6. I    77   I    23  I     2  I    97  I    23  I    222
  45 - 54 YEARS    I  34.7   I  10.4  I   0.9  I  43.7  I  10.4  I    3.0
                   I   1.8   I   3.5  I   1.4  I   5.0  I   4.6  I
                   I   1.0   I   0.3  I   0.0  I   1.3  I   0.3  I
                  -I---------I--------I--------I--------I--------I
                7. I    32   I     3  I     1  I    51  I    11  I     98
  55 - 64 YEARS    I  32.7   I   3.1  I   1.0  I  52.0  I  11.2  I    1.3
                   I   0.8   I   0.5  I   0.7  I   2.6  I   2.2  I
                   I   0.4   I   0.0  I   0.0  I   0.7  I   0.1  I
                  -I---------I--------I--------I--------I--------I
            COLUMN    4217       650      147     1928      505      7447
             TOTAL    56.6       8.7      2.0     25.9      6.8     100.0
(CONTINUED)
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CLR USER QUESTIONNAIRE: LIBRARY TYPE COMPARISON XTABS                                     08/05/82        PAGE   82

FILE   FINAL    (CREATION DATE = 08/03/82)

* * * * * * * * * * * * * * * * * *  C R O S S T A B U L A T I O N   O F  * * * * * * * * * * * * * * * * * * *
   RQ54     MY AGE GROUP IS                                    BY  LIBTYPE   LIBRARY GROUPING BY TYPE OF LIBRARY
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *  PAGE  2 OF  2

                    LIBTYPE
            COUNT  I
           ROW PCT IA.R.L. L OTHER AC COMMUNIT PUBLIC    STATE AN   ROW
           COL PCT IIBS       ADEMIC   Y COLLEG          D FEDERA  TOTAL
           TOT PCT I      1.I      2.I      3.I      4.I      5.I
RQ54       --------I--------I--------I--------I--------I--------I
               8.  I    22  I     0  I     0  I    37  I     4  I     63
  65 AND  OVER     I  34.9  I   0.0  I   0.0  I  58.7  I   6.3  I    0.8
                   I   0.5  I   0.0  I   0.0  I   1.9  I   0.8  I
                   I   0.3  I   0.0  I   0.0  I   0.5  I   0.1  I
                  -I--------I--------I--------I--------I--------I
            COLUMN     4217      650      147     1928      505     7447
             TOTAL     56.6      8.7      2.0     25.9      6.8    100.0

   5 OUT OF    40 ( 12.5%) OF THE VALID CELLS HAVE EXPECTED CELL FREQUENCY LESS THAN 5.0.
MINIMUM EXPECTED CELL FREQUENCY =  1.244
CHI SQUARE =   828.31055 WITH  28 DEGREES OF FREEDOM   SIGNIFICANCE =  0.0
PEARSON'S R = 0.14722  SIGNIFICANCE =  0.0000

NUMBER OF MISSING OBSERVATIONS =     647
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CLR USER QUESTIONNAIRE: LIBRARY TYPE COMPARISON XTABS                               08/05/82        PAGE   83

FILE   FINAL    (CREATION DATE = 08/03/82)

* * * * * * * * * * * * * * * * * * * * *   C R O S S T A B U L A T I O N   O F   * * * * * * * * * * * * * * * * * * * *
    RQ55      SEX                                                        BY  LIBTYPE   LIBRARY GROUPING BY TYPE OF LIBRARY
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *  PAGE  1 OF  1

                     LIBTYPE
            COUNT   I
           ROW PCT  IA.R.L. L OTHER AC COMMUNIT PUBLIC    STATE AN   ROW
           COL PCT  IIBS      ADEMIC   Y COLLEG           D FEDERA  TOTAL
           TOT PCT  I       1.I      2.I      3.I      4.I      5.I
RQ55       ---------I--------I--------I--------I--------I--------I
               1.   I  1631  I   276  I    49  I   821  I   176  I  2953
  FEMALE            I  55.2  I   9.3  I   1.7  I  27.8  I   6.0  I  40.1
                    I  39.1  I  42.8  I  33.6  I  43.1  I  35.2  I
                    I  22.1  I   3.7  I   0.7  I  11.1  I   2.4  I
                   -I--------I--------I--------I--------I--------I
               2.   I  2540  I   369  I    97  I  1084  I   324  I  4414
  MALE              I  57.5  I   8.4  I   2.2  I  24.6  I   7.3  I  59.9
                    I  60.9  I  57.2  I  66.4  I  56.9  I  64.8  I
                    I  34.5  I   5.0  I   1.3  I  14.7  I   4.4  I
                   -I--------I--------I--------I--------I--------I
           COLUMN      4171      645      146     1905      500     7367
            TOTAL      56.6      8.8      2.0     25.9      6.8    100.0

CHI SQUARE =     18.39124 WITH   4 DEGREES OF FREEDOM   SIGNIFICANCE =  0.0010
PEARSON'S R =-0.01361  SIGNIFICANCE =  0.1213

NUMBER OF MISSING OBSERVATIONS =      727
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CLR USER QUESTIONNAIRE: LIBRARY TYPE COMPARISON XTABS                                    08/05/82        PAGE   84

FILE   FINAL    (CREATION DATE = 08/03/82)

* * * * * * * * * * * * * * * * * * * * * C R O S S T A B U L A T I O N   O F  * * * * * * * * * * * * * * * * * * * *
    RQ56      CURRENT OR HIGHEST GRADE COMPLETED            BY  LIBTYPE   LIBRARY GROUPING BY TYPE OF LIBRARY
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * PAGE  1 OF  1

                    LIBTYPE
             COUNT  I
           ROW PCT  IA.R.L. L OTHER AC COMMUNIT PUBLIC    STATE AN  ROW
           COL PCT  IIBS      ADEMIC   Y COLLEG           D FEDERA  TOTAL
           TOT PCT  I      1.I      2.I      3.I      4.I      5.I
RQ56       --------I--------I--------I--------I--------I--------I
                 1. I    33  I     2  I     0  I    37  I     2  I     74
  GRADE   SCHOOL    I  44.6  I   2.7  I   0.0  I  50.0  I   2.7  I    1.0
                    I   0.8  I   0.3  I   0.0  I   1.9  I   0.4  I
                    I   0.4  I   0.0  I   0.0  I   0.5  I   0.0  I
                   -I--------I--------I--------I--------I--------I
                 2. I   116  I     7  I    24  I   499  I    22  I    668
  HIGH    SCHOOL    I  17.4  I   1.0  I   3.6  I  74.7  I   3.3  I    9.0
                    I   2.8  I   1.1  I  16.6  I  25.9  I   4.4  I
                    I   1.6  I   0.1  I   0.3  I   6.7  I   0.3  I
                   -I--------I--------I--------I--------I--------I
                 3. I  2221  I   438  I   112  I   547  I   113  I   3431
  SOME    COLLEGE   I  64.7  I  12.8  I   3.3  I  15.9  I   3.3  I   46.2
                    I  52.9  I  67.5  I  77.2  I  28.4  I  22.4  I
                    I  29.9  I   5.9  I   1.5  I   7.4  I   1.5  I
                   -I--------I--------I--------I--------I--------I
                 4. I  1832  I   202  I     9  I   840  I   368  I   3251
  COLLEGE GRADUATE  I  56.4  I   6.2  I   0.3  I  25.8  I  11.3  I   43.8
                    I  43.6  I  31.1  I   6.2  I  43.7  I  72.9  I
                    I  24.7  I   2.7  I   0.1  I  11.3  I   5.0  I
                   -I--------I--------I--------I--------I--------I
            COLUMN     4202      649      145     1923      505     7424
             TOTAL     56.6      8.7      2.0     25.9      6.8    100.0

    1 OUT OF     20 (  5.0%) OF THE VALID CELLS HAVE EXPECTED CELL FREQUENCY LESS THAN 5.0.
MINIMUM EXPECTED CELL FREQUENCY =   1.445
CHI SQUARE =  1382.59277 WITH  12 DEGREES OF FREEDOM   SIGNIFICANCE =  0.0
PEARSON'S R =-0.07126  SIGNIFICANCE =  0.0000

NUMBER OF MISSING OBSERVATIONS =      670
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CLR USER QUESTIONNAIRE: LIBRARY TYPE COMPARISON XTABS                                     08/05/82        PAGE   85

FILE   FINAL    (CREATION DATE = 08/03/82)

* * * * * * * * * * * * * * * * * * *   C R O S S T A B U L A T I O N   O F   * * * * * * * * * * * * * * * * * * *
   RQ57     MY ACADEMIC AREA IS                                  BY  LIBTYPE   LIBRARY GROUPING BY TYPE OF LIBRARY
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *  PAGE  1 OF  2

                    LIBTYPE
            COUNT  I
          ROW PCT  IA.R.L. L OTHER AC COMMUNIT   ROW
          COL PCT  IIBS      ADEMIC   Y COLLEG  TOTAL
          TOT PCT  I      1.I      2.I      3.I
RQ57      --------I--------I--------I--------I
               1.  I  1123  I   127  I    16  I   1266
  ART AND HUMANITI I  88.7  I  10.0  I   1.3  I   26.1
                   I  27.5  I  20.1  I  11.3  I
                   I  23.1  I   2.6  I   0.3  I
                  -I--------I--------I--------I
               2.  I   481  I    74  I     9  I    564
  PHYS-BIO SCIENCE I  85.3  I  13.1  I   1.6  I   11.6
                   I  11.8  I  11.7  I   6.3  I
                   I   9.9  I   1.5  I   0.2  I
                  -I--------I--------I--------I
               3.  I   753  I    96  I     5  I    854
  SOCIAL  SCIENCES I  88.2  I  11.2  I   0.6  I   17.6
                   I  18.4  I  15.2  I   3.5  I
                   I  15.5  I   2.0  I   0.1  I
                  -I--------I--------I--------I
               4.  I   482  I   126  I    37  I    645
  BUSINESS-MANAGEM I  74.7  I  19.5  I   5.7  I   13.3
                   I  11.8  I  20.0  I  26.1  I
                   I   9.9  I   2.6  I   0.8  I
                  -I--------I--------I--------I
               5.  I   189  I    74  I     4  I    267
  EDUCATION        I  70.8  I  27.7  I   1.5  I    5.5
                   I   4.6  I  11.7  I   2.8  I
                   I   3.9  I   1.5  I   0.1  I
                  -I--------I--------I--------I
               6.  I   495  I    54  I    29  I    578
  ENGINEERING      I  85.6  I   9.3  I   5.0  I   11.9
                   I  12.1  I   8.6  I  20.4  I
                   I  10.2  I   1.1  I   0.6  I
                  -I--------I--------I--------I
               7.  I   233  I    28  I     9  I    270
  MEDICAL-HEALTH S I  86.3  I  10.4  I   3.3  I    5.6
                   I   5.7  I   4.4  I   6.3  I
                   I   4.8  I   0.6  I   0.2  I
                  -I--------I--------I--------I
           COLUMN     4083      631      142      4856
            TOTAL     84.1     13.0      2.9     100.0
(CONTINUED)
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FILE   FINAL    (CREATION DATE = 08/03/82)

* * * * * * * * * * * * * * * * * * * *   C R O S S T A B U L A T I O N   O F   * * * * * * * * * * * * * * * * * * *
   RQ57      MY ACADEMIC AREA IS                                  BY  LIBTYPE   LIBRARY GROUPING BY TYPE OF LIBRARY
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * PAGE  2 OF  2

                  LIBTYPE
          COUNT  I
        ROW PCT  IA.R.L. L OTHER AC COMMUNIT   ROW
        COL PCT  IIBS      ADEMIC   Y COLLEG  TOTAL
        TOT PCT  I      1.I      2.I      3.I
RQ57    --------I--------I--------I--------I
             8.  I    83  I     6  I     6  I     95
  LAW            I  87.4  I   6.3  I   6.3  I    2.0
                 I   2.0  I   1.0  I   4.2  I
                 I   1.7  I   0.1  I   0.1  I
                -I--------I--------I--------I
             9.  I   114  I    28  I    25  I    167
  MAJOR UNDECLARED I 68.3 I  16.8  I  15.0  I    3.4
                 I   2.8  I   4.4  I  17.6  I
                 I   2.3  I   0.6  I   0.5  I
                -I--------I--------I--------I
            10.  I   130  I    18  I     2  I    150
  INTERDISCIPLINAR I 86.7 I  12.0  I   1.3  I    3.1
                 I   3.2  I   2.9  I   1.4  I
                 I   2.7  I   0.4  I   0.0  I
                -I--------I--------I--------I
         COLUMN     4083     631      142      4856
          TOTAL     84.1     13.0     2.9     100.0

    3 OUT OF    30 ( 10.0%) OF THE VALID CELLS HAVE EXPECTED CELL FREQUENCY LESS THAN 5.0.
MINIMUM EXPECTED CELL FREQUENCY =  2.778
CHI SQUARE =   259.11157 WITH  18 DEGREES OF FREEDOM   SIGNIFICANCE =  0.0
PEARSON'S R = 0.09715  SIGNIFICANCE =  0.0000

NUMBER OF MISSING OBSERVATIONS =     3238
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CLR USER QUESTIONNAIRE: LIBRARY TYPE COMPARISON XTABS                                 08/05/82       PAGE   88

FILE   FINAL    (CREATION DATE = 08/03/82)

* * * * * * * * * * *  C R O S S T A B U L A T I O N  * * * * * * * * * * *
   RQUEST58 (TABULATING      1) THE MAIN FOCUS OF MY ACADEMIC WORK IS:
BY LIBTYPE  LIBRARY GROUPING BY TYPE OF LIBRARY
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * PAGE   1 OF   1

                       LIBTYPE

                 COUNT  IA.R.L. L OTHER AC COMMUNIT
               ROW PCT  IIBS      ADEMIC   Y COLLEG    ROW
               COL PCT  I                  E           TOTAL
                        I     1  I     2  I     3  I
RQUEST58       ---------I--------I--------I--------I
            RQ58A       I  2966  I   469  I   130  I   3565
  COURSE WORK           I  83.2  I  13.2  I   3.6  I   74.4
                        I  73.8  I  75.3  I  88.4  I
                        I--------I--------I--------I
            RQ58B       I   388  I    64  I     4  I    456
  TEACHING              I  85.1  I  14.0  I   0.9  I    9.5
                        I   9.7  I  10.3  I   2.7  I
                        I--------I--------I--------I
            RQ58C       I  1534  I   235  I    38  I   1807
  RESEARCH              I  84.9  I  13.0  I   2.1  I   37.7
                        I  38.2  I  37.7  I  25.9  I
                        I--------I--------I--------I
                COLUMN     4019      623      147      4789
                 TOTAL     83.9     13.0      3.1     100.0

PERCENTS AND TOTALS BASED ON RESPONDENTS

   4789 VALID CASES         3305 MISSING CASES
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CLR USER QUESTIONNAIRE: LIBRARY TYPE COMPARISON XTABS                              08/05/82        PAGE   90

FILE   FINAL    (CREATION DATE = 08/03/82)

* * * * * * * * * * * * * * * * * * *   C R O S S T A B U L A T I O N   O F   * * * * * * * * * * * * * * * * * * *
   RQ59      PRESENT AFFILIATION                                     BY  LIBTYPE   LIBRARY GROUPING BY TYPE OF LIBRARY
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *  PAGE  1 OF  2

                       LIBTYPE
              COUNT  I
            ROW PCT  IA.R.L. L OTHER AC COMMUNIT   ROW
            COL PCT  IIBS      ADEMIC   Y COLLEG  TOTAL
            TOT PCT  I      1.I      2.I      3.I
RQ59        --------I--------I--------I--------I
                  1. I   904  I   198  I   121  I  1223
  FRESHMAN-SOPHOMO  I  73.9  I  16.2  I   9.9  I  25.7
                     I  22.7  I  31.9  I  82.9  I
                     I  19.0  I   4.2  I   2.5  I
                    -I--------I--------I--------I
                  2. I  1352  I   256  I    10  I  1618
  JUNIOR--SENIOR    I  83.6  I  15.8  I   0.6  I  34.1
                     I  33.9  I  41.2  I   6.8  I
                     I  28.5  I   5.4  I   0.2  I
                    -I--------I--------I--------I
                  3. I   542  I    94  I     1  I   637
  GRADUATE-MASTERS  I  85.1  I  14.8  I   0.2  I  13.4
                     I  13.6  I  15.1  I   0.7  I
                     I  11.4  I   2.0  I   0.0  I
                    -I--------I--------I--------I
                  4. I   442  I    19  I     0  I   461
  GRADUATE-DOCTORA  I  95.9  I   4.1  I   0.0  I   9.7
                     I  11.1  I   3.1  I   0.0  I
                     I   9.3  I   0.4  I   0.0  I
                    -I--------I--------I--------I
                  5. I   108  I     1  I     1  I   110
  GRADUATE-PROFESS  I  98.2  I   0.9  I   0.9  I   2.3
                     I   2.7  I   0.2  I   0.7  I
                     I   2.3  I   0.0  I   0.0  I
                    -I--------I--------I--------I
                  6. I   158  I    31  I     0  I   189
  FACULTY            I  83.6  I  16.4  I   0.0  I   4.0
                     I   4.0  I   5.0  I   0.0  I
                     I   3.3  I   0.7  I   0.0  I
                    -I--------I--------I--------I
                  7. I   132  I     1  I     0  I   133
  STAFF              I  99.2  I   0.8  I   0.0  I   2.8
                     I   3.3  I   0.2  I   0.0  I
                     I   2.8  I   0.0  I   0.0  I
                    -I--------I--------I--------I
             COLUMN     3984      621      146     4751
              TOTAL     83.9     13.1      3.1    100.0
(CONTINUED)
```

```
FILE   FINAL    (CREATION DATE = 08/03/82)

* * * * * * * * * * * * * * * * * * *   C R O S S T A B U L A T I O N   O F   * * * * * * * * * * * * * * * * * * *
    RQ59      PRESENT AFFILIATION                              BY  LIBTYPE   LIBRARY GROUPING BY TYPE OF LIBRARY
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * PAGE  2 OF  2

                     LIBTYPE
           COUNT    I
          ROW PCT  IA.R.L. L OTHER AC COMMUNIT   ROW
          COL PCT  IIBS      ADEMIC   Y COLLEG  TOTAL
          TOT PCT  I      1.I      2.I      3.I
RQ59      --------I--------I--------I--------I
              8.   I   346  I    21  I    13  I   380
  OTHER   STATUS   I  91.1  I   5.5  I   3.4  I   8.0
                   I   8.7  I   3.4  I   8.9  I
                   I   7.3  I   0.4  I   0.3  I
                  -I--------I--------I--------I
          COLUMN      3984      621      146     4751
           TOTAL      83.9     13.1      3.1    100.0

    2 OUT OF     24 (  8.3%) OF THE VALID CELLS HAVE EXPECTED CELL FREQUENCY LESS THAN 5.0.
MINIMUM EXPECTED CELL FREQUENCY =  3.380
CHI SQUARE =    385.81934 WITH  14 DEGREES OF FREEDOM   SIGNIFICANCE =  0.0
PEARSON'S R =-0.15706  SIGNIFICANCE =  0.0000

NUMBER OF MISSING OBSERVATIONS =     3343
```

Appendix E

FREQUENCY TABLES FOR THE NON-USER QUESTIONNAIRE

This appendix includes computer listings of questionnaire data from the Statistical Package for the Social Sciences (SPSS). Page numbering in this appendix is that of the original computer listings, and does not correspond to the numbering for the report as a whole. Page references in the text are to the internal numbers in this appendix.

```
CLR NON-USER QUESTIONNAIRE: AGGREGATE FREQUENCIES                                    08/04/82        PAGE   14

FILE    NUQSYS    (CREATION DATE = 08/03/82)

GROUP RQUEST1    I HAVEN'T USED THE COMPUTER CATALOG BECA
      (VALUE TABULATED =       1)

                                                                     PCT OF   PCT OF
DICHOTOMY LABEL                             NAME         COUNT    RESPONSES    CASES

DO NOT LIKE TO USE COMPUTERS                RQ1A           338         3.6       8.7

DID NOT KNOW THERE WAS A COMPUTER CATALO    RQ1B          1173        12.4      30.0

DO NOT KNOW WHERE IT IS                     RQ1C           714         7.5      18.3

NO TIME TO LEARN HOW TO USE IT              RQ1D          1601        16.9      41.0

HAVE NOT TAKEN TRAINING SESSIONS ON USE     RQ1E          1746        18.4      44.7

NO STAFF ASSISTANCE AT TERMINALS            RQ1F           311         3.3       8.0

TERMINALS ALL IN USE                        RQ1G           134         1.4       3.4

NO NEED TO USE ANY LIBRARY CATALOG          RQ1H          1555        16.4      39.8

CARD CATALOG EASIER TO USE                  RQ1I           615         6.5      15.7

CARD CATALOG CONTAINS MORE INFO I NEED      RQ1J           167         1.8       4.3

VISITOR-INFREQUENT USER OF LIBRARY          RQ1K          1114        11.8      28.5
                                                       -------       -----     -----
                                  TOTAL RESPONSES         9468       100.0     242.5

     76 MISSING CASES          3905 VALID CASES
```

```
CLR NON-USER QUESTIONNAIRE: AGGREGATE FREQUENCIES                       08/04/82       PAGE   16

FILE    NUQSYS    (CREATION DATE = 08/03/82)

QST2       TIME NEEDED TO LEARN TO USE COMPUTER CAT

                                                    RELATIVE  ADJUSTED     CUM
                                         ABSOLUTE     FREQ      FREQ      FREQ
CATEGORY LABEL                     CODE    FREQ      (PCT)     (PCT)     (PCT)

DAY OR  MORE                         1.     148        3.7       3.8       3.8

HALF DAY - A DAY                     2.     155        3.9       4.0       7.8

1 HOUR- HALF DAY                     3.     311        7.8       8.0      15.8

30 MIN - 1 HOUR                      4.     790       19.8      20.4      36.2

15 - 30 MINUTES                      5.    1004       25.2      25.9      62.2

0 - 15  MINUTES                      6.    1466       36.8      37.8     100.0

                                     0.     107        2.7   MISSING     100.0
                                         -------    ------    ------
                                 TOTAL     3981      100.0     100.0

MEAN          4.741      STD ERR        0.022      MEDIAN        5.031
MODE          6.000      STD DEV        1.345      VARIANCE      1.808
KURTOSIS      0.519      SKEWNESS      -1.058      RANGE         5.000
MINIMUM       1.000      MAXIMUM        6.000

VALID CASES     3874     MISSING CASES    107
```

```
CLR NON-USER QUESTIONNAIRE: AGGREGATE FREQUENCIES                                        08/04/82          PAGE   17

FILE    NUQSYS    (CREATION DATE = 08/03/82)

QST3        HOW DIFFICULT-EASY TO LEARN TO USE C C

                                                     RELATIVE   ADJUSTED     CUM
                                         ABSOLUTE      FREQ       FREQ       FREQ
CATEGORY LABEL                   CODE      FREQ       (PCT)      (PCT)      (PCT)

VERY     DIFFICULT                 1.        60         1.5        1.5        1.5

SOMEWHAT DIFFICULT                 2.       626        15.7       16.0       17.5

SOMEWHAT EASY                      3.      1811        45.5       46.2       63.8

VERY     EASY                      4.      1419        35.6       36.2      100.0

                                   0.        65         1.6    MISSING      100.0
                                         ------      ------     ------
                                TOTAL      3981       100.0      100.0


MEAN            3.172     STD ERR          0.012     MEDIAN          3.202
MODE            3.000     STD DEV          0.744     VARIANCE        0.554
KURTOSIS       -0.349     SKEWNESS        -0.511     RANGE           3.000
MINIMUM         1.000     MAXIMUM          4.000

VALID CASES      3916     MISSING CASES       65
```

```
CLR NON-USER QUESTIONNAIRE: AGGREGATE FREQUENCIES                                   08/04/82        PAGE   18

FILE    NUQSYS    (CREATION DATE = 08/03/82)

QST4       OVERALL ATTITUDE TOWARD COMPUTER CATALOG

                                                         RELATIVE   ADJUSTED     CUM
                                              ABSOLUTE     FREQ       FREQ       FREQ
CATEGORY LABEL                        CODE      FREQ       (PCT)      (PCT)      (PCT)

VERY FAVORABLE                          1.      1745       43.8       45.9       45.9

SOMEWHAT FAVORABLE                      2.      1644       41.3       43.3       89.2

SOMEWHAT UNFAVORABLE                    3.       318        8.0        8.4       97.6

VERY    UNFAVORABLE                     4.        91        2.3        2.4      100.0

                                        0.       183        4.6     MISSING     100.0
                                              ------     ------     ------
                                     TOTAL      3981      100.0      100.0


MEAN            1.672      STD ERR          0.012      MEDIAN          1.594
MODE            1.000      STD DEV          0.729      VARIANCE        0.532
KURTOSIS        0.763      SKEWNESS         0.965      RANGE           3.000
MINIMUM         1.000      MAXIMUM          4.000

VALID CASES      3798      MISSING CASES      183
```

```
CLR NON-USER QUESTIONNAIRE: AGGREGATE FREQUENCIES                       08/04/82        PAGE   19

FILE    NUQSYS    (CREATION DATE = 08/03/82)

QST5       HOW LIKELY TO USE COMPUTER CAT IN FUTURE

                                                  RELATIVE  ADJUSTED    CUM
                                         ABSOLUTE   FREQ      FREQ      FREQ
CATEGORY LABEL                  CODE       FREQ    (PCT)     (PCT)     (PCT)

VERY      LIKELY                  1.       1319     33.1      34.0      34.0

SOMEWHAT LIKELY                   2.       1580     39.7      40.7      74.6

SOMEWHAT UNLIKELY                 3.        633     15.9      16.3      90.9

VERY      UNLIKELY                4.        353      8.9       9.1     100.0

                                  0.         96      2.4    MISSING    100.0
                                         ------   ------    ------
                               TOTAL       3981    100.0     100.0


MEAN           2.005     STD ERR        0.015     MEDIAN         1.895
MODE           2.000     STD DEV        0.931     VARIANCE       0.866
KURTOSIS      -0.405     SKEWNESS       0.667     RANGE          3.000
MINIMUM        1.000     MAXIMUM        4.000

VALID CASES     3885     MISSING CASES     96
```

```
CLR NON-USER QUESTIONNAIRE: AGGREGATE FREQUENCIES                                  08/04/82        PAGE   20

FILE    NUQSYS    (CREATION DATE = 08/03/82)

QST6        COMPUTER--CARD CATALOG COMPARISON

                                                       RELATIVE   ADJUSTED      CUM
                                            ABSOLUTE     FREQ       FREQ       FREQ
CATEGORY LABEL                      CODE      FREQ      (PCT)      (PCT)      (PCT)

BETTER                                1.      1224       30.7       33.8       33.8

EQUAL                                 2.       582       14.6       16.1       49.9

WORSE                                 3.       140        3.5        3.9       53.8

CAN'T   DECIDE                        4.      1672       42.0       46.2      100.0

                                      0.       363        9.1    MISSING      100.0
                                            -------    -------    -------
                                   TOTAL      3981      100.0      100.0

MEAN          2.625      STD ERR        0.023        MEDIAN        2.521
MODE          4.000      STD DEV        1.355        VARIANCE      1.836
KURTOSIS     -1.803      SKEWNESS      -0.115        RANGE         3.000
MINIMUM       1.000      MAXIMUM        4.000

VALID CASES    3618      MISSING CASES    363
```

```
CLR NON-USER QUESTIONNAIRE: AGGREGATE FREQUENCIES                                 08/04/82       PAGE   21

FILE   NUQSYS   (CREATION DATE = 08/03/82)

QST7      I USE THIS LIBRARY

                                                   RELATIVE  ADJUSTED    CUM
                                         ABSOLUTE    FREQ      FREQ      FREQ
CATEGORY LABEL                     CODE    FREQ     (PCT)     (PCT)     (PCT)

DAILY                                1.    1036      26.0      26.5      26.5

WEEKLY                               2.    1268      31.9      32.4      58.9

MONTHLY                              3.     661      16.6      16.9      75.8

4 TIMES A YEAR                       4.     426      10.7      10.9      86.7

ONCE A  YEAR                         5.     154       3.9       3.9      90.7

NOT BEFORE TODAY                     6.     365       9.2       9.3     100.0

                                     0.      71       1.8   MISSING     100.0
                                          ------    ------    ------
                                  TOTAL    3981     100.0     100.0


MEAN           2.614      STD ERR        0.024      MEDIAN        2.225
MODE           2.000      STD DEV        1.530      VARIANCE      2.342
KURTOSIS      -0.116      SKEWNESS       0.914      RANGE         5.000
MINIMUM        1.000      MAXIMUM        6.000

VALID CASES     3910      MISSING CASES     71
```

```
CLR NON-USER QUESTIONNAIRE: AGGREGATE FREQUENCIES                                  08/04/82       PAGE   22

FILE    NUQSYS    (CREATION DATE = 08/03/82)

RQ8        I USE LIBRARY'S OTHER CATALOGS

                                                        RELATIVE   ADJUSTED     CUM
                                             ABSOLUTE     FREQ       FREQ      FREQ
CATEGORY LABEL                       CODE      FREQ      (PCT)      (PCT)     (PCT)

EVERY    VISIT                         1.       355        8.9        9.7       9.7

MOST     VISITS                        2.       557       14.0       15.2      24.9

OCCASIONALLY                           3.      1155       29.0       31.5      56.4

RARELY                                 4.       928       23.3       25.3      81.7

NOT BEFORE TODAY                       5.       670       16.8       18.3     100.0

                                       0.        86        2.2    MISSING     100.0

NOT APPLICABLE                        99.       230        5.8    MISSING     100.0
                                             -------    -------    -------
                                    TOTAL      3981      100.0      100.0


MEAN            3.273    STD ERR         0.020     MEDIAN          3.297
MODE            3.000    STD DEV         1.204     VARIANCE        1.450
KURTOSIS       -0.770    SKEWNESS       -0.240     RANGE           4.000
MINIMUM         1.000    MAXIMUM         5.000

VALID CASES     3665     MISSING CASES    316
```

```
CLR NON-USER QUESTIONNAIRE: AGGREGATE FREQUENCIES                           08/04/82      PAGE   23

FILE   NUQSYS   (CREATION DATE = 08/03/82)

QST9       I USE ANOTHER COMPUTER SYSTEM


                                                     RELATIVE   ADJUSTED    CUM
                                          ABSOLUTE     FREQ       FREQ      FREQ
CATEGORY LABEL                     CODE     FREQ      (PCT)      (PCT)     (PCT)

DAILY                                1.      325        8.2        8.4       8.4

WEEKLY                               2.      491       12.3       12.7      21.1

MONTHLY                              3.      408       10.2       10.5      31.6

4 TIMES A YEAR                       4.      353        8.9        9.1      40.7

ONCE A  YEAR                         5.      345        8.7        8.9      49.6

NEVER                                6.     1953       49.1       50.4     100.0

                                     0.      106        2.7    MISSING     100.0
                                          ------     ------     ------
                                  TOTAL     3981      100.0      100.0


MEAN          4.487      STD ERR        0.029      MEDIAN         5.508
MODE          6.000      STD DEV        1.799      VARIANCE       3.236
KURTOSIS     -1.050      SKEWNESS      -0.705      RANGE          5.000
MINIMUM       1.000      MAXIMUM        6.000

VALID CASES    3875      MISSING CASES    106
```

```
CLR NON-USER QUESTIONNAIRE: AGGREGATE FREQUENCIES                         08/04/82      PAGE  24

FILE   NUQSYS   (CREATION DATE = 08/03/82)

QST10     MY AGE GROUP IS

                                                   RELATIVE  ADJUSTED    CUM
                                        ABSOLUTE     FREQ      FREQ      FREQ
CATEGORY LABEL                   CODE     FREQ      (PCT)     (PCT)     (PCT)

14 AND  UNDER                     1.        20        0.5       0.5       0.5

15 - 19 YEARS                     2.       688       17.3      17.5      18.0

20 - 24 YEARS                     3.      1583       39.8      40.3      58.3

25 - 34 YEARS                     4.       884       22.2      22.5      80.8

35 - 44 YEARS                     5.       347        8.7       8.8      89.6

45 - 54 YEARS                     6.       185        4.6       4.7      94.3

55 - 64 YEARS                     7.       127        3.2       3.2      97.5

65 AND  OVER                      8.        97        2.4       2.5     100.0

                                  0.        50        1.3   MISSING     100.0
                                        ------     ------    ------
                                 TOTAL    3981      100.0     100.0


MEAN             3.610     STD ERR          0.022     MEDIAN          3.294
MODE             3.000     STD DEV          1.400     VARIANCE        1.959
KURTOSIS         1.375     SKEWNESS         1.214     RANGE           7.000
MINIMUM          1.000     MAXIMUM          8.000

VALID CASES      3931      MISSING CASES       50
```

```
FILE    NUQSYS    (CREATION DATE = 08/03/82)

QST11      SEX

                                                    RELATIVE  ADJUSTED     CUM
                                          ABSOLUTE    FREQ      FREQ      FREQ
CATEGORY LABEL                    CODE      FREQ     (PCT)     (PCT)     (PCT)

FEMALE                              1.      1869      46.9      47.9      47.9

MALE                                2.      2031      51.0      52.1     100.0

                                    0.        81       2.0   MISSING     100.0
                                         -------    ------    ------
                                 TOTAL      3981     100.0     100.0

MEAN              1.521      STD ERR          0.008      MEDIAN          1.540
MODE              2.000      STD DEV          0.500      VARIANCE        0.250
KURTOSIS         -1.994      SKEWNESS        -0.083      RANGE           1.000
MINIMUM           1.000      MAXIMUM          2.000

VALID CASES      3900      MISSING CASES      81
```

```
CLR NON-USER QUESTIONNAIRE: AGGREGATE FREQUENCIES                                  08/04/82      PAGE   26

FILE   NUQSYS   (CREATION DATE = 08/03/82)

QST12      CURRENT OR HIGHEST GRADE COMPLETED

                                                      RELATIVE  ADJUSTED    CUM
                                           ABSOLUTE     FREQ      FREQ      FREQ
CATEGORY LABEL                      CODE     FREQ      (PCT)     (PCT)     (PCT)

GRADE    SCHOOL                       1.       27       0.7       0.7       0.7

HIGH     SCHOOL                       2.      319       8.0       8.1       8.8

SOME     COLLEGE                      3.     2096      52.7      53.4      62.2

COLLEGE GRAD                          4.     1481      37.2      37.8     100.0

                                      0.       58       1.5   MISSING     100.0
                                           ------    ------    ------
                                   TOTAL     3981     100.0     100.0

MEAN          3.282     STD ERR        0.010       MEDIAN        3.271
MODE          3.000     STD DEV        0.638       VARIANCE      0.407
KURTOSIS      0.088     SKEWNESS      -0.486       RANGE         3.000
MINIMUM       1.000     MAXIMUM        4.000

VALID CASES    3923     MISSING CASES    58
```

```
CLR NON-USER QUESTIONNAIRE: AGGREGATE FREQUENCIES                       08/04/82        PAGE   27

FILE    NUQSYS    (CREATION DATE = 08/03/82)

RQ13       MY ACADEMIC AREA IS

                                                     RELATIVE  ADJUSTED    CUM
                                           ABSOLUTE    FREQ      FREQ      FREQ
CATEGORY LABEL                      CODE     FREQ     (PCT)     (PCT)     (PCT)

ART & HUMANITIES                      1.      367       9.2      15.3      15.3

PHYS-BIO SCIENCES                     2.      283       7.1      11.8      27.2

SOCIAL  SCIENCES                      3.      300       7.5      12.5      39.7

BUSINESS-MANAGEMENT                   4.      528      13.3      22.1      61.7

EDUCATION                             5.      122       3.1       5.1      66.8

ENGINEERING                           6.      365       9.2      15.2      82.1

MEDICAL-HEALTH                        7.      196       4.9       8.2      90.3

LAW                                   8.       57       1.4       2.4      92.6

MAJOR UNDECLARED                      9.      124       3.1       5.2      97.8

INTERDISCIPLINARY                    10.       52       1.3       2.2     100.0

                                      0.      127       3.2   MISSING     100.0

NOT APPLICABLE                       99.     1460      36.7   MISSING     100.0
                                           ------    ------    ------
                                  TOTAL      3981     100.0     100.0

MEAN            4.264       STD ERR        0.049       MEDIAN          3.968
MODE            4.000       STD DEV        2.401       VARIANCE        5.766
KURTOSIS       -0.560       SKEWNESS       0.461       RANGE           9.000
MINIMUM         1.000       MAXIMUM       10.000

VALID CASES     2394        MISSING CASES  1587
```

```
CLR NON-USER QUESTIONNAIRE: AGGREGATE FREQUENCIES                                    08/04/82        PAGE   29

FILE    NUQSYS    (CREATION DATE = 08/03/82)

GROUP RQUEST14  THE MAIN FOCUS OF MY ACADEMIC WORK IS:
     (VALUE TABULATED =       1)

                                                                  PCT OF  PCT OF
DICHOTOMY LABEL                              NAME        COUNT  RESPONSES  CASES

COURSE WORK                                  RQ14A        2024      75.7    84.3

TEACHING                                     RQ14B         126       4.7     5.2

RESEARCH                                     RQ14C         523      19.6    21.8
                                                       -------     -----   -----
                                 TOTAL RESPONSES          2673     100.0   111.3

   1579 MISSING CASES         2402 VALID CASES
```

```
CLR NON-USER QUESTIONNAIRE: AGGREGATE FREQUENCIES                          08/04/82       PAGE   31

FILE   NUQSYS   (CREATION DATE = 08/03/82)

RQ15      PRESENT AFFILIATION

                                                    RELATIVE  ADJUSTED     CUM
                                          ABSOLUTE     FREQ      FREQ      FREQ
CATEGORY LABEL                    CODE      FREQ      (PCT)     (PCT)     (PCT)

FRESHMAN-SOPHOM                     1.       840      21.1      34.8      34.8

JUNIOR--SENIOR                      2.       874      22.0      36.2      70.9

GRADUATE-MASTERS LEV                3.       227       5.7       9.4      80.3

GRADUATE-DOCTORAL LE                4.       129       3.2       5.3      85.7

GRADUATE-PROFESSIONA                5.        69       1.7       2.9      88.5

FACULTY                             6.        37       0.9       1.5      90.1

STAFF                               7.        24       0.6       1.0      91.1

OTHER                               8.       216       5.4       8.9     100.0

                                    0.       105       2.6   MISSING     100.0

NOT APPLICABLE                     99.      1460      36.7   MISSING     100.0
                                          ------    ------    ------
                                  TOTAL     3981     100.0     100.0

MEAN            2.586      STD ERR        0.042       MEDIAN          1.921
MODE            2.000      STD DEV        2.069       VARIANCE        4.282
KURTOSIS        1.704      SKEWNESS       1.666       RANGE           7.000
MINIMUM         1.000      MAXIMUM        8.000

VALID CASES     2416       MISSING CASES   1565
```

Appendix F

RESPONSES BY TYPE OF LIBRARY FOR THE NON-USER QUESTIONNAIRE

This appendix includes computer listings of questionnaire data from the Statistical Package for the Social Sciences (SPSS). Page numbering in this appendix is that of the original computer listings, and does not correspond to the numbering for the report as a whole. Page references in the text are to the internal numbers in this appendix.

```
CLR NON-USER QUESTIONNAIRE: LIBRARY TYPE COMPARISON XTABS                     08/05/82        PAGE   14

FILE    NUQSYS    (CREATION DATE = 08/03/82)

* * * * * * * * * * * *  C R O S S T A B U L A T I O N  * * * * * * * * * * * *
   RQUEST1  (TABULATING      1) I HAVEN'T USED THE COMPUTER CATALOG BECA
BY LIBTYPE  LIBRARY GROUPING BY TYPE OF LIBRARY
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * PAGE   1 OF   2

                        LIBTYPE

                   COUNT  IARL LIBS OTHER AC COMMUNIT PUBLIC    STATE AN
                 ROW PCT  I         ADEMIC   Y COLLEG           D FEDERA    ROW
                 COL PCT  I                  E                  L           TOTAL
                          I     1  I     2  I     3  I     4  I     5  I
RQUEST1           --------I--------I--------I--------I--------I--------I
                    RQ1A  I   150  I    42  I    27  I    95  I    24  I     338
   DO NOT LIKE TO USE C   I  44.4  I  12.4  I   8.0  I  28.1  I   7.1  I     8.7
                          I  10.1  I   5.6  I  11.9  I   9.0  I   6.4  I
                          I--------I--------I--------I--------I--------I
                    RQ1B  I   422  I   222  I    37  I   355  I   137  I    1173
   DID NOT KNOW THERE W   I  36.0  I  18.9  I   3.2  I  30.3  I  11.7  I    30.0
                          I  28.3  I  29.4  I  16.3  I  33.6  I  36.4  I
                          I--------I--------I--------I--------I--------I
                    RQ1C  I   289  I   156  I    20  I   163  I    86  I     714
   DO NOT KNOW WHERE IT   I  40.5  I  21.8  I   2.8  I  22.8  I  12.0  I    18.3
                          I  19.4  I  20.7  I   8.8  I  15.4  I  22.9  I
                          I--------I--------I--------I--------I--------I
                    RQ1D  I   617  I   319  I    71  I   462  I   132  I    1601
   NO TIME TO LEARN HOW   I  38.5  I  19.9  I   4.4  I  28.9  I   8.2  I    41.0
                          I  41.4  I  42.3  I  31.3  I  43.8  I  35.1  I
                          I--------I--------I--------I--------I--------I
                    RQ1E  I   671  I   395  I    87  I   443  I   150  I    1746
   HAVE NOT TAKEN TRAIN   I  38.4  I  22.6  I   5.0  I  25.4  I   8.6  I    44.7
                          I  45.0  I  52.4  I  38.3  I  42.0  I  39.9  I
                          I--------I--------I--------I--------I--------I
                    RQ1F  I   117  I    81  I    15  I    83  I    15  I     311
   NO STAFF ASSISTANCE    I  37.6  I  26.0  I   4.8  I  26.7  I   4.8  I     8.0
                          I   7.8  I  10.7  I   6.6  I   7.9  I   4.0  I
                          I--------I--------I--------I--------I--------I
                    RQ1G  I    32  I    26  I    21  I    47  I     8  I     134
   TERMINALS ALL IN USE   I  23.9  I  19.4  I  15.7  I  35.1  I   6.0  I     3.4
                          I   2.1  I   3.4  I   9.3  I   4.5  I   2.1  I
                          I--------I--------I--------I--------I--------I
                    RQ1H  I   624  I   323  I   140  I   376  I    92  I    1555
   NO NEED TO USE ANY L   I  40.1  I  20.8  I   9.0  I  24.2  I   5.9  I    39.8
                          I  41.8  I  42.8  I  61.7  I  35.6  I  24.5  I
                          I--------I--------I--------I--------I--------I
                  COLUMN     1492      754      227     1056      376      3905
                   TOTAL     38.2     19.3      5.8     27.0      9.6     100.0

PERCENTS AND TOTALS BASED ON RESPONDENTS

(CONTINUED)
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CLR NON-USER QUESTIONNAIRE: LIBRARY TYPE COMPARISON XTABS                              08/05/82         PAGE   15

FILE    NUQSYS    (CREATION DATE = 08/03/82)

* * * * * * * * * * * *  C R O S S T A B U L A T I O N  * * * * * * * * * * * *
   RQUEST1  (TABULATING      1) I HAVEN'T USED THE COMPUTER CATALOG BECA
BY LIBTYPE  LIBRARY GROUPING BY TYPE OF LIBRARY
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * PAGE    2 OF    2

                      LIBTYPE

                COUNT  IARL LIBS OTHER AC COMMUNIT PUBLIC    STATE AN
              ROW PCT  I         ADEMIC   Y COLLEG           D FEDERA   ROW
              COL PCT  I                  E                  L          TOTAL
                       I     1  I     2  I     3  I     4  I     5  I
RQUEST1        --------I--------I--------I--------I--------I--------I
                 RQ1I  I   256  I   125  I    25  I   180  I    29  I    615
   CARD CATALOG EASIER I  41.6  I  20.3  I   4.1  I  29.3  I   4.7  I   15.7
                       I  17.2  I  16.6  I  11.0  I  17.0  I   7.7  I
                       I--------I--------I--------I--------I--------I
                 RQ1J  I    57  I    28  I    21  I    47  I    14  I    167
   CARD CATALOG CONTAIN I  34.1  I  16.8  I  12.6  I  28.1  I   8.4  I    4.3
                       I   3.8  I   3.7  I   9.3  I   4.5  I   3.7  I
                       I--------I--------I--------I--------I--------I
                 RQ1K  I   355  I   150  I    31  I   385  I   193  I   1114
   VISITOR-INFREQUENT U I  31.9  I  13.5  I   2.8  I  34.6  I  17.3  I   28.5
                       I  23.8  I  19.9  I  13.7  I  36.5  I  51.3  I
                       I--------I--------I--------I--------I--------I
               COLUMN     1492      754      227     1056      376     3905
                TOTAL     38.2     19.3      5.8     27.0      9.6    100.0

PERCENTS AND TOTALS BASED ON RESPONDENTS

   3905 VALID CASES          76 MISSING CASES
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CLR NON-USER QUESTIONNAIRE: LIBRARY TYPE COMPARISON XTABS                     08/05/82        PAGE   17

FILE    NUQSYS   (CREATION DATE = 08/03/82)

* * * * * * * * * * * * * * * * * * * *   C R O S S T A B U L A T I O N   O F   * * * * * * * * * * * * * * * * * * * *
   QST2      TIME NEEDED TO LEARN TO USE COMPUTER CAT      BY  LIBTYPE   LIBRARY GROUPING BY TYPE OF LIBRARY
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *  PAGE  1 OF  1

                   LIBTYPE

           COUNT  I
         ROW PCT  IARL LIBS OTHER AC COMMUNIT PUBLIC    STATE AN   ROW
         COL PCT  I         ADEMIC   Y COLLEG           D FEDERA  TOTAL
         TOT PCT  I      1.I      2.I      3.I      4.I      5.I
QST2     --------I--------I--------I--------I--------I--------I
               1.  I    33  I    40  I    11  I    49  I    15  I   148
  DAY OR  MORE     I  22.3  I  27.0  I   7.4  I  33.1  I  10.1  I   3.8
                   I   2.2  I   5.3  I   4.9  I   4.7  I   4.0  I
                   I   0.9  I   1.0  I   0.3  I   1.3  I   0.4  I
                  -I--------I--------I--------I--------I--------I
               2.  I    48  I    37  I     6  I    32  I    32  I   155
  HALF DAY - A DAY I  31.0  I  23.9  I   3.9  I  20.6  I  20.6  I   4.0
                   I   3.2  I   4.9  I   2.7  I   3.1  I   8.6  I
                   I   1.2  I   1.0  I   0.2  I   0.8  I   0.8  I
                  -I--------I--------I--------I--------I--------I
               3.  I   126  I    80  I    15  I    52  I    38  I   311
  1 HOUR- HALF DAY I  40.5  I  25.7  I   4.8  I  16.7  I  12.2  I   8.0
                   I   8.5  I  10.6  I   6.7  I   5.0  I  10.2  I
                   I   3.3  I   2.1  I   0.4  I   1.3  I   1.0  I
                  -I--------I--------I--------I--------I--------I
               4.  I   318  I   188  I    44  I   164  I    76  I   790
  30 MIN - 1 HOUR  I  40.3  I  23.8  I   5.6  I  20.8  I   9.6  I  20.4
                   I  21.4  I  25.0  I  19.6  I  15.8  I  20.3  I
                   I   8.2  I   4.9  I   1.1  I   4.2  I   2.0  I
                  -I--------I--------I--------I--------I--------I
               5.  I   402  I   200  I    76  I   234  I    92  I  1004
  15 - 30 MINUTES  I  40.0  I  19.9  I   7.6  I  23.3  I   9.2  I  25.9
                   I  27.0  I  26.6  I  33.9  I  22.6  I  24.6  I
                   I  10.4  I   5.2  I   2.0  I   6.0  I   2.4  I
                  -I--------I--------I--------I--------I--------I
               6.  I   562  I   207  I    72  I   504  I   121  I  1466
  0 - 15  MINUTES  I  38.3  I  14.1  I   4.9  I  34.4  I   8.3  I  37.8
                   I  37.7  I  27.5  I  32.1  I  48.7  I  32.4  I
                   I  14.5  I   5.3  I   1.9  I  13.0  I   3.1  I
                  -I--------I--------I--------I--------I--------I
           COLUMN     1489      752      224     1035      374     3874
            TOTAL     38.4     19.4      5.8     26.7      9.7    100.0

CHI SQUARE =   153.08191 WITH  20 DEGREES OF FREEDOM   SIGNIFICANCE =  0.0
PEARSON'S R = 0.00634  SIGNIFICANCE =  0.3536

NUMBER OF MISSING OBSERVATIONS =      107
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CLR NON-USER QUESTIONNAIRE: LIBRARY TYPE COMPARISON XTABS                              08/05/82        PAGE   18

FILE    NUQSYS    (CREATION DATE = 08/03/82)

* * * * * * * * * * * * * * * * * * * *   C R O S S T A B U L A T I O N   O F   * * * * * * * * * * * * * * * * * * * *
    QST3      HOW DIFFICULT-EASY TO LEARN TO USE C C          BY  LIBTYPE   LIBRARY GROUPING BY TYPE OF LIBRARY
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * PAGE  1 OF  1

                      LIBTYPE
             COUNT  I
           ROW PCT  IARL LIBS OTHER AC COMMUNIT PUBLIC    STATE AN   ROW
           COL PCT  I         ADEMIC   Y COLLEG           D FEDERA  TOTAL
           TOT PCT  I     1.I     2.I      3.I     4.I      5.I
QST3       --------I--------I--------I--------I--------I--------I
              1.    I     9  I    15  I    16  I    17  I     3  I    60
  VERY     DIFFICUL I  15.0  I  25.0  I  26.7  I  28.3  I   5.0  I   1.5
                    I   0.6  I   2.0  I   7.1  I   1.6  I   0.8  I
                    I   0.2  I   0.4  I   0.4  I   0.4  I   0.1  I
                   -I--------I--------I--------I--------I--------I
              2.    I   219  I   151  I    41  I   158  I    57  I   626
  SOMEWHAT DIFFICU  I  35.0  I  24.1  I   6.5  I  25.2  I   9.1  I  16.0
                    I  14.5  I  19.9 .I  18.2  I  15.1  I  15.0  I
                    I   5.6  I   3.9  I   1.0  I   4.0  I   1.5  I
                   -I--------I--------I--------I--------I--------I
              3.    I   700  I   386  I   100  I   429  I   196  I  1811
  SOMEWHAT EASY     I  38.7  I  21.3  I   5.5  I  23.7  I  10.8  I  46.2
                    I  46.5  I  50.9  I  44.4  I  40.9  I  51.7  I
                    I  17.9  I   9.9  I   2.6  I  11.0  I   5.0  I
                   -I--------I--------I--------I--------I--------I
              4.    I   578  I   206  I    68  I   444  I   123  I  1419
  VERY     EASY     I  40.7  I  14.5  I   4.8  I  31.3  I   8.7  I  36.2
                    I  38.4  I  27.2  I  30.2  I  42.4  I  32.5  I
                    I  14.8  I   5.3  I   1.7  I  11.3  I   3.1  I
                   -I--------I--------I--------I--------I--------I
            COLUMN     1506      758      225     1048      379     3916
             TOTAL     38.5     19.4      5.7     26.8      9.7    100.0

     1 OUT OF     20 (  5.0%) OF THE VALID CELLS HAVE EXPECTED CELL FREQUENCY LESS THAN 5.0.
MINIMUM EXPECTED CELL FREQUENCY =   3.447
CHI SQUARE =    113.74948 WITH  12 DEGREES OF FREEDOM   SIGNIFICANCE =  0.0000
PEARSON'S R = 0.00060  SIGNIFICANCE =  0.4851

NUMBER OF MISSING OBSERVATIONS =        65
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CLR NON-USER QUESTIONNAIRE: LIBRARY TYPE COMPARISON XTABS                        08/05/82         PAGE   19

FILE    NUQSYS    (CREATION DATE = 08/03/82)

* * * * * * * * * * * * * * * * * * * * *   C R O S S T A B U L A T I O N . O F   * * * * * * * * * * * * * * * * * * * * *
     QST4       OVERALL ATTITUDE TOWARD COMPUTER CATALOG      BY  LIBTYPE   LIBRARY GROUPING BY TYPE OF LIBRARY
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * PAGE  1 OF  1

                     LIBTYPE
            COUNT   I
           ROW PCT  IARL LIBS OTHER AC COMMUNIT PUBLIC    STATE AN  ROW
           COL PCT  I         ADEMIC   Y COLLEG           D FEDERA  TOTAL
           TOT PCT  I      1.I      2.I      3.I      4.I      5.I
QST4       --------I--------I--------I--------I--------I--------I
              1.   I    625  I   316  I   110  I   480  I   214  I   1745
  VERY FAVORABLE   I   35.8  I  18.1  I   6.3  I  27.5  I  12.3  I   45.9
                   I   43.0  I  42.3  I  50.0  I  47.4  I  58.6  I
                   I   16.5  I   8.3  I   2.9  I  12.6  I   5.6  I
                  -I--------I--------I--------I--------I--------I
              2.   I    699  I   352  I    73  I   402  I   118  I   1644
  SOMEWHAT FAVORAB I   42.5  I  21.4  I   4.4  I  24.5  I   7.2  I   43.3
                   I   48.1  I  47.1  I  33.2  I  39.7  I  32.3  I
                   I   18.4  I   9.3  I   1.9  I  10.6  I   3.1  I
                  -I--------I--------I--------I--------I--------I
              3.   I    106  I    64  I    23  I    99  I    26  I    318
  SOMEWHAT UNFAVOR I   33.3  I  20.1  I   7.2  I  31.1  I   8.2  I    8.4
                   I    7.3  I   8.6  I  10.5  I   9.8  I   7.1  I
                   I    2.8  I   1.7  I   0.6  I   2.6  I   0.7  I
                  -I--------I--------I--------I--------I--------I
              4.   I     24  I    15  I    14  I    31  I     7  I     91
  VERY    UNFAVORA I   26.4  I  16.5  I  15.4  I  34.1  I   7.7  I    2.4
                   I    1.7  I   2.0  I   6.4  I   3.1  I   1.9  I
                   I    0.6  I   0.4  I   0.4  I   0.8  I   0.2  I
                  -I--------I--------I--------I--------I--------I
           COLUMN      1454      747      220     1012      365     3798
            TOTAL      38.3     19.7      5.8     26.6      9.6    100.0

CHI SQUARE =     74.32248 WITH  12 DEGREES OF FREEDOM   SIGNIFICANCE =  0.0000
PEARSON'S R =-0.03223  SIGNIFICANCE =  0.0235

NUMBER OF MISSING OBSERVATIONS =      183
```

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CLR NON-USER QUESTIONNAIRE: LIBRARY TYPE COMPARISON XTABS                         08/05/82        PAGE   20

FILE    NUQSYS    (CREATION DATE = 08/03/82)

* * * * * * * * * * * * * * * * * * *   C R O S S T A B U L A T I O N   O F   * * * * * * * * * * * * * * * * * * *
     QST5       HOW LIKELY TO USE COMPUTER CAT IN FUTURE      BY  LIBTYPE    LIBRARY GROUPING BY TYPE OF LIBRARY
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *  PAGE  1 OF  1

                       LIBTYPE
              COUNT   I
              ROW PCT IARL LIBS OTHER AC COMMUNIT PUBLIC    STATE AN   ROW
              COL PCT I         ADEMIC   Y COLLEG           D FEDERA   TOTAL
              TOT PCT I      1.I      2.I      3.I      4.I      5.I
QST5          --------I--------I--------I--------I--------I--------I
                   1. I   430  I   244  I    61  I   409  I   175  I   1319
  VERY       LIKELY   I  32.6  I  18.5  I   4.6  I  31.0  I  13.3  I   34.0
                      I  28.8  I  32.3  I  27.2  I  39.5  I  46.4  I
                      I  11.1  I   6.3  I   1.6  I  10.5  I   4.5  I
                     -I--------I--------I--------I--------I--------I
                   2. I   631  I   329  I   101  I   387  I   132  I   1580
  SOMEWHAT LIKELY     I  39.9  I  20.8  I   6.4  I  24.5  I   8.4  I   40.7
                      I  42.3  I  43.5  I  45.1  I  37.4  I  35.0  I
                      I  16.2  I   8.5  I   2.6  I  10.0  I   3.4  I
                     -I--------I--------I--------I--------I--------I
                   3. I   278  I   123  I    43  I   143  I    46  I    633
  SOMEWHAT UNLIKEL    I  43.9  I  19.4  I   6.8  I  22.6  I   7.3  I   16.3
                      I  18.6  I  16.3  I  19.2  I  13.8  I  12.2  I
                      I   7.2  I   3.2  I   1.1  I   3.7  I   1.2  I
                     -I--------I--------I--------I--------I--------I
                   4. I   153  I    60  I    19  I    97  I    24  I    353
  VERY       UNLIKELY I  43.3  I  17.0  I   5.4  I  27.5  I   6.8  I    9.1
                      I  10.3  I   7.9  I   8.5  I   9.4  I   6.4  I
                      I   3.9  I   1.5  I   0.5  I   2.5  I   0.6  I
                     -I--------I--------I--------I--------I--------I
               COLUMN    1492      756      224     1036      377      3885
                TOTAL    38.4     19.5      5.8     26.7      9.7     100.0

CHI SQUARE =    71.64859 WITH  12 DEGREES OF FREEDOM   SIGNIFICANCE =  0.0000
PEARSON'S R =-0.10055  SIGNIFICANCE =  0.0000

NUMBER OF MISSING OBSERVATIONS =        96
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CLR NON-USER QUESTIONNAIRE: LIBRARY TYPE COMPARISON XTABS                    08/05/82        PAGE   21

FILE    NUQSYS    (CREATION DATE = 08/03/82)

* * * * * * * * * * * * * * * * * * * *   C R O S S T A B U L A T I O N   O F   * * * * * * * * * * * * * * * * * * *
    QST6      COMPUTER--CARD CATALOG COMPARISON              BY  LIBTYPE   LIBRARY GROUPING BY TYPE OF LIBRARY
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *  PAGE  1 OF  1

                    LIBTYPE
            COUNT  I
           ROW PCT IARL LIBS OTHER AC COMMUNIT PUBLIC    STATE AN   ROW
           COL PCT I          ADEMIC   Y COLLEG          D FEDERA  TOTAL
           TOT PCT I       1.I      2.I      3.I      4.I      5.I
QST6      ---------I--------I--------I--------I--------I--------I
                1. I   394  I   270  I   118  I   308  I   134  I  1224
  BETTER           I  32.2  I  22.1  I   9.6  I  25.2  I  10.9  I  33.8
                   I  28.7  I  37.1  I  53.2  I  32.1  I  40.0  I
                   I  10.9  I   7.5  I   3.3  I   8.5  I   3.7  I
                  -I--------I--------I--------I--------I--------I
                2. I   224  I   136  I    45  I   153  I    24  I   582
  EQUAL            I  38.5  I  23.4  I   7.7  I  26.3  I   4.1  I  16.1
                   I  16.3  I  18.7  I  20.3  I  16.0  I   7.2  I
                   I   6.2  I   3.8  I   1.2  I   4.2  I   0.7  I
                  -I--------I--------I--------I--------I--------I
                3. I    46  I    25  I    15  I    43  I    11  I   140
  WORSE            I  32.9  I  17.9  I  10.7  I  30.7  I   7.9  I   3.9
                   I   3.3  I   3.4  I   6.8  I   4.5  I   3.3  I
                   I   1.3  I   0.7  I   0.4  I   1.2  I   0.3  I
                  -I--------I--------I--------I--------I--------I
                4. I   711  I   296  I    44  I   455  I   166  I  1672
  CAN'T   DECIDE   I  42.5  I  17.7  I   2.6  I  27.2  I   9.9  I  46.2
                   I  51.7  I  40.7  I  19.8  I  47.4  I  49.6  I
                   I  19.7  I   8.2  I   1.2  I  12.6  I   4.6  I
                  -I--------I--------I--------I--------I--------I
            COLUMN    1375      727      222      959      335     3618
             TOTAL    38.0     20.1      6.1     26.5      9.3    100.0

CHI SQUARE =    120.15497 WITH  12 DEGREES OF FREEDOM   SIGNIFICANCE =  0.0000
PEARSON'S R =-0.03913  SIGNIFICANCE =  0.0093

NUMBER OF MISSING OBSERVATIONS =      363
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CLR NON-USER QUESTIONNAIRE: LIBRARY TYPE COMPARISON XTABS                              08/05/82        PAGE   22

FILE    NUQSYS    (CREATION DATE = 08/03/82)

* * * * * * * * * * * * * * * * * * * *   C R O S S T A B U L A T I O N   O F   * * * * * * * * * * * * * * * * * * * *
    QST7       I USE THIS LIBRARY                                BY  LIBTYPE   LIBRARY GROUPING BY TYPE OF LIBRARY
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *  PAGE  1 OF  1

                     LIBTYPE
            COUNT   I
          ROW PCT   IARL LIBS OTHER AC COMMUNIT PUBLIC    STATE AN   ROW
          COL PCT   I         ADEMIC   Y COLLEG           D FEDERA  TOTAL
          TOT PCT   I      1.I      2.I      3.I      4.I      5.I
QST7       --------I--------I--------I--------I--------I--------I
                1.  I   575  I   293  I   103  I    43  I    22  I   1036
  DAILY             I  55.5  I  28.3  I   9.9  I   4.2  I   2.1  I   26.5
                    I  38.3  I  38.6  I  45.8  I   4.1  I   5.8  I
                    I  14.7  I   7.5  I   2.6  I   1.1  I   0.6  I
                   -I--------I--------I--------I--------I--------I
                2.  I   540  I   289  I    90  I   304  I    45  I   1268
  WEEKLY            I  42.6  I  22.8  I   7.1  I  24.0  I   3.5  I   32.4
                    I  36.0  I  38.1  I  40.0  I  29.1  I  11.8  I
                    I  13.8  I   7.4  I   2.3  I   7.8  I   1.2  I
                   -I--------I--------I--------I--------I--------I
                3.  I   181  I    85  I    18  I   314  I    63  I    661
  MONTHLY           I  27.4  I  12.9  I   2.7  I  47.5  I   9.5  I   16.9
                    I  12.1  I  11.2  I   8.0  I  30.1  I  16.5  I
                    I   4.6  I   2.2  I   0.5  I   8.0  I   1.6  I
                   -I--------I--------I--------I--------I--------I
                4.  I   117  I    45  I     2  I   200  I    62  I    426
  4 TIMES A YEAR    I  27.5  I  10.6  I   0.5  I  46.9  I  14.6  I   10.9
                    I   7.8  I   5.9  I   0.9  I  19.2  I  16.3  I
                    I   3.0  I   1.2  I   0.1  I   5.1  I   1.6  I
                   -I--------I--------I--------I--------I--------I
                5.  I    24  I    17  I     4  I    47  I    62  I    154
  ONCE A  YEAR      I  15.6  I  11.0  I   2.6  I  30.5  I  40.3  I    3.9
                    I   1.6  I   2.2  I   1.8  I   4.5  I  16.3  I
                    I   0.6  I   0.4  I   0.1  I   1.2  I   1.6  I
                   -I--------I--------I--------I--------I--------I
                6.  I    65  I    30  I     8  I   135  I   127  I    365
  NOT BEFORE TODAY  I  17.8  I   8.2  I   2.2  I  37.0  I  34.8  I    9.3
                    I   4.3  I   4.0  I   3.6  I  12.9  I  33.3  I
                    I   1.7  I   0.8  I   0.2  I   3.5  I   3.2  I
                   -I--------I--------I--------I--------I--------I
           COLUMN      1502      759      225     1043      381     3910
            TOTAL      38.4     19.4      5.8     26.7      9.7    100.0

CHI SQUARE =  1260.94434 WITH  20 DEGREES OF FREEDOM   SIGNIFICANCE =  0.0
PEARSON'S R = 0.44303  SIGNIFICANCE =  0.0000

NUMBER OF MISSING OBSERVATIONS =     . 71
```

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CLR NON-USER QUESTIONNAIRE: LIBRARY TYPE COMPARISON XTABS                              08/05/82        PAGE   23

FILE    NUQSYS    (CREATION DATE = 08/03/82)

* * * * * * * * * * * * * * * * * * * * * *   C R O S S T A B U L A T I O N   O F   * * * * * * * * * * * * * * * * * * * * * *
   RQ8        I USE LIBRARY'S OTHER CATALOGS                       BY  LIBTYPE   LIBRARY GROUPING BY TYPE OF LIBRARY
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *  PAGE  1 OF  1

                   LIBTYPE
             COUNT  I
            ROW PCT IARL LIBS OTHER AC COMMUNIT PUBLIC   STATE AN   ROW
            COL PCT I         ADEMIC   Y COLLEG          D FEDERA  TOTAL
            TOT PCT I      1.I      2.I      3.I      4.I      5.I
RQ8         --------I--------I--------I--------I--------I--------I
                 1. I   111  I    32  I     2  I   136  I    74  I   355
  EVERY    VISIT    I  31.3  I   9.0  I   0.6  I  38.3  I  20.8  I   9.7
                    I   7.4  I   4.2  I   0.9  I  15.1  I  25.3  I
                    I   3.0  I   0.9  I   0.1  I   3.7  I   2.0  I
                   -I--------I--------I--------I--------I--------I
                 2. I   233  I   121  I     2  I   164  I    37  I   557
  MOST     VISITS   I  41.8  I  21.7  I   0.4  I  29.4  I   6.6  I  15.2
                    I  15.6  I  16.0  I   0.9  I  18.2  I  12.6  I
                    I   6.4  I   3.3  I   0.1  I   4.5  I   1.0  I
                   -I--------I--------I--------I--------I--------I
                 3. I   513  I   303  I    29  I   274  I    36  I  1155
  OCCASIONALLY      I  44.4  I  26.2  I   2.5  I  23.7  I   3.1  I  31.5
                    I  34.4  I  40.0  I  12.9  I  30.5  I  12.3  I
                    I  14.0  I   8.3  I   0.8  I   7.5  I   1.0  I
                   -I--------I--------I--------I--------I--------I
                 4. I   454  I   215  I    81  I   153  I    25  I   928
  RARELY            I  48.9  I  23.2  I   8.7  I  16.5  I   2.7  I  25.3
                    I  30.4  I  28.4  I  36.2  I  17.0  I   8.5  I
                    I  12.4  I   5.9  I   2.2  I   4.2  I   0.7  I
                   -I--------I--------I--------I--------I--------I
                 5. I   181  I    86  I   110  I   172  I   121  I   670
  NOT BEFORE TODAY  I  27.0  I  12.8  I  16.4  I  25.7  I  18.1  I  18.3
                    I  12.1  I  11.4  I  49.1  I  19.1  I  41.3  I
                    I   4.9  I   2.3  I   3.0  I   4.7  I   3.3  I
                   -I--------I--------I--------I--------I--------I
            COLUMN     1492      757      224      899      293    3665
             TOTAL     40.7     20.7      6.1     24.5      8.0   100.0

CHI SQUARE =    605.72461 WITH  16 DEGREES OF FREEDOM   SIGNIFICANCE =  0.0
PEARSON'S R =-0.01320  SIGNIFICANCE =  0.2121

NUMBER OF MISSING OBSERVATIONS =      316
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CLR NON-USER QUESTIONNAIRE: LIBRARY TYPE COMPARISON XTABS                        08/05/82        PAGE   24

FILE   NUQSYS   (CREATION DATE = 08/03/82)

* * * * * * * * * * * * * * * * * * * * *   C R O S S T A B U L A T I O N   O F   * * * * * * * * * * * * * * * * * * * * *
    QST9        I USE ANOTHER COMPUTER SYSTEM                 BY  LIBTYPE   LIBRARY GROUPING BY TYPE OF LIBRARY
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * PAGE  1 OF  1

                     LIBTYPE
             COUNT  I
           ROW PCT  IARL LIBS OTHER AC COMMUNIT PUBLIC    STATE AN   ROW
           COL PCT  I         ADEMIC   Y COLLEG           D FEDERA  TOTAL
           TOT PCT  I      1.I      2.I      3.I      4.I      5.I
QST9       ---------I--------I--------I--------I--------I--------I
                1.  I   106  I    64  I    13  I   111  I    31  I   325
  DAILY             I  32.6  I  19.7  I   4.0  I  34.2  I   9.5  I   8.4
                    I   7.1  I   8.4  I   5.8  I  10.8  I   8.2  I
                    I   2.7  I   1.7  I   0.3  I   2.9  I   0.8  I
                   -I--------I--------I--------I--------I--------I
                2.  I   232  I    98  I    20  I    97  I    44  I   491
  WEEKLY            I  47.3  I  20.0  I   4.1  I  19.8  I   9.0  I  12.7
                    I  15.6  I  12.9  I   8.9  I   9.4  I  11.7  I
                    I   6.0  I   2.5  I   0.5  I   2.5  I   1.1  I
                   -I--------I--------I--------I--------I--------I
                3.  I   187  I    82  I     8  I    81  I    50  I   408
  MONTHLY           I  45.8  I  20.1  I   2.0  I  19.9  I  12.3  I  10.5
                    I  12.6  I  10.8  I   3.6  I   7.9  I  13.3  I
                    I   4.8  I   2.1  I   0.2  I   2.1  I   1.3  I
                   -I--------I--------I--------I--------I--------I
                4.  I   158  I    67  I    11  I    72  I    45  I   353
  4 TIMES A YEAR    I  44.8  I  19.0  I   3.1  I  20.4  I  12.7  I   9.1
                    I  10.6  I   8.8  I   4.9  I   7.0  I  12.0  I
                    I   4.1  I   1.7  I   0.3  I   1.9  I   1.2  I
                   -I--------I--------I--------I--------I--------I
                5.  I   165  I    72  I     2  I    74  I    32  I   345
  ONCE A  YEAR      I  47.8  I  20.9  I   0.6  I  21.4  I   9.3  I   8.9
                    I  11.1  I   9.5  I   0.9  I   7.2  I   8.5  I
                    I   4.3  I   1.9  I   0.1  I   1.9  I   0.8  I
                   -I--------I--------I--------I--------I--------I
                6.  I   638  I   376  I   170  I   595  I   174  I  1953
  NEVER             I  32.7  I  19.3  I   8.7  I  30.5  I   8.9  I  50.4
                    I  42.9  I  49.5  I  75.9  I  57.8  I  46.3  I
                    I  16.5  I   9.7  I   4.4  I  15.4  I   4.5  I
                   -I--------I--------I--------I--------I--------I
            COLUMN      1486      759      224     1030      376    3875
             TOTAL      38.3     19.6      5.8     26.6      9.7   100.0

CHI SQUARE =    161.55388 WITH  20 DEGREES OF FREEDOM   SIGNIFICANCE =  0.0
PEARSON'S R = 0.05943  SIGNIFICANCE =  0.0001

NUMBER OF MISSING OBSERVATIONS =      106
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FILE   NUQSYS   (CREATION DATE = 08/03/82)

* * * * * * * * * * * * * * * * * * * * *   C R O S S T A B U L A T I O N   O F   * * * * * * * * * * * * * * * * * * * * *
   QST10     MY AGE GROUP IS                                  BY  LIBTYPE   LIBRARY GROUPING BY TYPE OF LIBRARY
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * PAGE  1 OF  2

                   LIBTYPE
           COUNT  I
         ROW PCT  IARL LIBS OTHER AC COMMUNIT PUBLIC    STATE AN   ROW
         COL PCT  I         ADEMIC   Y COLLEG           D FEDERA  TOTAL
         TOT PCT  I     1.I     2.I     3.I      4.I      5.I
QST10    --------I--------I--------I--------I--------I--------I
              1.  I     2  I     2  I     0  I    15  I     1  I     20
  14 AND  UNDER   I  10.0  I  10.0  I   0.0  I  75.0  I   5.0  I    0.5
                  I   0.1  I   0.3  I   0.0  I   1.4  I   0.3  I
                  I   0.1  I   0.1  I   0.0  I   0.4  I   0.0  I
                 -I--------I--------I--------I--------I--------I
              2.  I   339  I   163  I    48  I   111  I    27  I    688
  15 - 19 YEARS   I  49.3  I  23.7  I   7.0  I  16.1  I   3.9  I   17.5
                  I  22.5  I  21.3  I  21.3  I  10.6  I   7.1  I
                  I   8.6  I   4.1  I   1.2  I   2.8  I   0.7  I
                 -I--------I--------I--------I--------I--------I
              3.  I   748  I   405  I   118  I   197  I   115  I   1583
  20 - 24 YEARS   I  47.3  I  25.6  I   7.5  I  12.4  I   7.3  I   40.3
                  I  49.6  I  53.0  I  52.4  I  18.7  I  30.1  I
                  I  19.0  I  10.3  I   3.0  I   5.0  I   2.9  I
                 -I--------I--------I--------I--------I--------I
              4.  I   311  I   134  I    33  I   300  I   106  I    884
  25 - 34 YEARS   I  35.2  I  15.2  I   3.7  I  33.9  I  12.0  I   22.5
                  I  20.6  I  17.5  I  14.7  I  28.5  I  27.7  I
                  I   7.9  I   3.4  I   0.8  I   7.6  I   2.7  I
                 -I--------I--------I--------I--------I--------I
              5.  I    59  I    38  I    14  I   169  I    67  I    347
  35 - 44 YEARS   I  17.0  I  11.0  I   4.0  I  48.7  I  19.3  I    8.8
                  I   3.9  I   5.0  I   6.2  I  16.1  I  17.5  I
                  I   1.5  I   1.0  I   0.4  I   4.3  I   1.7  I
                 -I--------I--------I--------I--------I--------I
              6.  I    30  I    14  I     8  I   104  I    29  I    185
  45 - 54 YEARS   I  16.2  I   7.6  I   4.3  I  56.2  I  15.7  I    4.7
                  I   2.0  I   1.8  I   3.6  I   9.9  I   7.6  I
                  I   0.8  I   0.4  I   0.2  I   2.6  I   0.7  I
                 -I--------I--------I--------I--------I--------I
              7.  I    12  I     3  I     3  I    82  I    27  I    127
  55 - 64 YEARS   I   9.4  I   2.4  I   2.4  I  64.6  I  21.3  I    3.2
                  I   0.8  I   0.4  I   1.3  I   7.8  I   7.1  I
                  I   0.3  I   0.1  I   0.1  I   2.1  I   0.7  I
                 -I--------I--------I--------I--------I--------I
          COLUMN     1508      764      225     1052      382     3931
           TOTAL     38.4     19.4      5.7     26.8      9.7    100.0
(CONTINUED)
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CLR NON-USER QUESTIONNAIRE: LIBRARY TYPE COMPARISON XTABS                                  08/05/82        PAGE   26

FILE    NUQSYS    (CREATION DATE = 08/03/82)

* * * * * * * * * * * * * * * * * * * * *  C R O S S T A B U L A T I O N   O F  * * * * * * * * * * * * * * * * * * * * *
    QST10     MY AGE GROUP IS                                BY  LIBTYPE   LIBRARY GROUPING BY TYPE OF LIBRARY
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *  PAGE  2 OF  2

                    LIBTYPE
             COUNT  I
           ROW PCT  IARL LIBS OTHER AC COMMUNIT PUBLIC    STATE AN   ROW
           COL PCT  I         ADEMIC   Y COLLEG           D FEDERA  TOTAL
           TOT PCT  I      1.I      2.I      3.I      4.I      5.I
QST10      --------I--------I--------I--------I--------I--------I
                8.  I     7  I     5  I     1  I    74  I    10  I    97
   65 AND  OVER     I   7.2  I   5.2  I   1.0  I  76.3  I  10.3  I   2.5
                    I   0.5  I   0.7  I   0.4  I   7.0  I   2.6  I
                    I   0.2  I   0.1  I   0.0  I   1.9  I   0.3  I
                   -I--------I--------I--------I--------I--------I
            COLUMN     1508      764      225     1052      382     3931
             TOTAL     38.4     19.4      5.7     26.8      9.7    100.0

    3 OUT OF    40 (  7.5%) OF THE VALID CELLS HAVE EXPECTED CELL FREQUENCY LESS THAN 5.0.
MINIMUM EXPECTED CELL FREQUENCY =   1.145
CHI SQUARE =    865.16064 WITH  28 DEGREES OF FREEDOM   SIGNIFICANCE =  0.0
PEARSON'S R = 0.37031   SIGNIFICANCE =  0.0000

NUMBER OF MISSING OBSERVATIONS =       50
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CLR NON-USER QUESTIONNAIRE: LIBRARY TYPE COMPARISON XTABS                        08/05/82        PAGE   27

FILE    NUQSYS    (CREATION DATE = 08/03/82)

* * * * * * * * * * * * * * * * * * * *  C R O S S T A B U L A T I O N   O F  * * * * * * * * * * * * * * * * * * * * *
    QST11     SEX                                                   BY  LIBTYPE   LIBRARY GROUPING BY TYPE OF LIBRARY
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *  PAGE  1 OF  1

                     LIBTYPE
              COUNT  I
            ROW PCT  IARL LIBS OTHER AC COMMUNIT PUBLIC    STATE AN  ROW
            COL PCT  I         ADEMIC   Y COLLEG           D FEDERA  TOTAL
            TOT PCT  I      1.I      2.I      3.I      4.I      5.I
QST11       --------I--------I--------I--------I--------I--------I
                 1.  I   629  I   356  I   113  I   600  I   171  I   1869
  FEMALE             I  33.7  I  19.0  I   6.0  I  32.1  I   9.1  I   47.9
                     I  42.0  I  46.8  I  50.4  I  57.8  I  45.1  I
                     I  16.1  I   9.1  I   2.9  I  15.4  I   4.4  I
                    -I--------I--------I--------I--------I--------I
                 2.  I   869  I   405  I   111  I   438  I   208  I   2031
  MALE               I  42.8  I  19.9  I   5.5  I  21.6  I  10.2  I   52.1
                     I  58.0  I  53.2  I  49.6  I  42.2  I  54.9  I
                     I  22.3  I  10.4  I   2.8  I  11.2  I   5.3  I
                    -I--------I--------I--------I--------I--------I
             COLUMN     1498      761      224     1038      379     3900
              TOTAL     38.4     19.5      5.7     26.6      9.7    100.0

CHI SQUARE =     63.90050 WITH    4 DEGREES OF FREEDOM    SIGNIFICANCE =  0.0000
PEARSON'S R =-0.09409  SIGNIFICANCE =   0.0000

NUMBER OF MISSING OBSERVATIONS =        81
```

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CLR NON-USER QUESTIONNAIRE: LIBRARY TYPE COMPARISON XTABS                              08/05/82        PAGE   28

FILE    NUQSYS    (CREATION DATE = 08/03/82)

* * * * * * * * * * * * * * * * *  C R O S S T A B U L A T I O N   O F  * * * * * * * * * * * * * * * * * * * *
   QST12      CURRENT OR HIGHEST GRADE COMPLETED            BY  LIBTYPE   LIBRARY GROUPING BY TYPE OF LIBRARY
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * PAGE  1 OF  1

                     LIBTYPE
              COUNT  I
            ROW PCT  IARL LIBS OTHER AC COMMUNIT PUBLIC    STATE AN   ROW
            COL PCT  I         ADEMIC   Y COLLEG           D FEDERA   TOTAL
            TOT PCT  I      1.I      2.I      3.I      4.I      5.I
QST12       --------I--------I--------I--------I--------I--------I
                 1.  I      6  I      3  I      1  I     16  I      1  I     27
  GRADE     SCHOOL   I   22.2  I   11.1  I    3.7  I   59.3  I    3.7  I    0.7
                     I    0.4  I    0.4  I    0.4  I    1.5  I    0.3  I
                     I    0.2  I    0.1  I    0.0  !    0.4  I    0.0  I
                    -I--------I--------I--------I--------I--------I
                 2.  I     48  I     30  I     15  I    190  I     36  I    319
  HIGH      SCHOOL   I   15.0  I    9.4  I    4.7  I   59.6  I   11.3  I    8.1
                     I    3.2  I    3.9  I    6.7  I   18.1  I    9.5  I
                     I    1.2  I    0.8  I    0.4  I    4.8  I    0.9  I
                    -I--------I--------I--------I--------I--------I
                 3.  I    892  I    533  I    184  I    372  I    115  I   2096
  SOME      COLLEGE  I   42.6  I   25.4  I    8.8  I   17.7  I    5.5  I   53.4
                     I   59.2  I   69.9  I   81.8  I   35.5  I   30.3  I
                     I   22.7  I   13.6  I    4.7  I    9.5  I    2.9  I
                    -I--------I--------I--------I--------I--------I
                 4.  I    562  I    197  I     25  I    470  I    227  I   1481
  COLLEGE GRAD       I   37.9  I   13.3  I    1.7  I   31.7  I   15.3  I   37.8
                     I   37.3  I   25.8  I   11.1  I   44.8  I   59.9  I
                     I   14.3  I    5.0  I    0.6  I   12.0  I    5.8  I
                    -I--------I--------I--------I--------I--------I
             COLUMN     1508      763      225     1048      379     3923
              TOTAL     38.4     19.4      5.7     26.7      9.7    100.0

     2 OUT OF     20 ( 10.0%) OF THE VALID CELLS HAVE EXPECTED CELL FREQUENCY LESS THAN 5.0.
MINIMUM EXPECTED CELL FREQUENCY =   1.549
CHI SQUARE =    523.84155 WITH  12 DEGREES OF FREEDOM    SIGNIFICANCE =  0.0
PEARSON'S R = 0.00500  SIGNIFICANCE =  0.3772

NUMBER OF MISSING OBSERVATIONS =       58
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CLR NON-USER QUESTIONNAIRE: LIBRARY TYPE COMPARISON XTABS                    08/05/82        PAGE   29

FILE    NUQSYS    (CREATION DATE = 08/03/82)

* * * * * * * * * * * * * * * * * * *   C R O S S T A B U L A T I O N   O F   * * * * * * * * * * * * * * * * * * * *
   RQ13      MY ACADEMIC AREA IS                                BY  LIBTYPE   LIBRARY GROUPING BY TYPE OF LIBRARY
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * PAGE  1 OF  2

                   LIBTYPE
           COUNT  I
         ROW PCT  IARL LIBS OTHER AC COMMUNIT   ROW
         COL PCT  I          ADEMIC   Y COLLEG  TOTAL
         TOT PCT  I     1.I     2.I     3.I
RQ13     --------I--------I--------I--------I
              1.  I   274  I    78  I    15  I   367
  ART & HUMANITIES I  74.7  I  21.3  I   4.1  I  15.3
                  I  19.1  I  10.6  I   6.8  I
                  I  11.4  I   3.3  I   0.6  I
                 -I--------I--------I--------I
              2.  I   164  I   106  I    13  I   283
  PHYS-BIO SCIENCE I  58.0  I  37.5  I   4.6  I  11.8
                  I  11.4  I  14.4  I   5.9  I
                  I   6.9  I   4.4  I   0.5  I
                 -I--------I--------I--------I
              3.  I   218  I    71  I    11  I   300
  SOCIAL  SCIENCES I  72.7  I  23.7  I   3.7  I  12.5
                  I  15.2  I   9.7  I   5.0  I
                  I   9.1  I   3.0  I   0.5  I
                 -I--------I--------I--------I
              4.  I   236  I   234  I    58  I   528
  BUSINESS-MANAGEM I  44.7  I  44.3  I  11.0  I  22.1
                  I  16.4  I  31.8  I  26.1  I
                  I   9.9  I   9.8  I   2.4  I
                 -I--------I--------I--------I
              5.  I    50  I    59  I    13  I   122
  EDUCATION       I  41.0  I  48.4  I  10.7  I   5.1
                  I   3.5  I   8.0  I   5.9  I
                  I   2.1  I   2.5  I   0.5  I
                 -I--------I--------I--------I
              6.  I   233  I    80  I    52  I   365
  ENGINEERING     I  63.8  I  21.9  I  14.2  I  15.2
                  I  16.2  I  10.9  I  23.4  I
                  I   9.7  I   3.3  I   2.2  I
                 -I--------I--------I--------I
              7.  I   125  I    45  I    26  I   196
  MEDICAL-HEALTH  I  63.8  I  23.0  I  13.3  I   8.2
                  I   8.7  I   6.1  I  11.7  I
                  I   5.2  I   1.9  I   1.1  I
                 -I--------I--------I--------I
          COLUMN     1437      735      222     2394
           TOTAL     60.0     30.7      9.3    100.0
(CONTINUED)
```

```
CLR NON-USER QUESTIONNAIRE: LIBRARY TYPE COMPARISON XTABS                    08/05/82        PAGE   30

FILE    NUQSYS    (CREATION DATE = 08/03/82)

* * * * * * * * * * * * * * * * * * * * *   C R O S S T A B U L A T I O N   O F   * * * * * * * * * * * * * * * * * * * * *
   RQ13      MY ACADEMIC AREA IS                                 BY  LIBTYPE   LIBRARY GROUPING BY TYPE OF LIBRARY
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * PAGE  2 OF  2

                      LIBTYPE
                COUNT  I
              ROW PCT  IARL LIBS OTHER AC COMMUNIT   ROW
              COL PCT  I         ADEMIC   Y COLLEG  TOTAL
              TOT PCT  I      1.I      2.I      3.I
RQ13          --------I--------I--------I--------I
                   8.  I    46  I    10  I     1  I    57
   LAW                 I  80.7  I  17.5  I   1.8  I   2.4
                       I   3.2  I   1.4  I   0.5  I
                       I   1.9  I   0.4  I   0.0  I
                      -I--------I--------I--------I
                   9.  I    51  I    40  I    33  I   124
   MAJOR UNDECLARED    I  41.1  I  32.3  I  26.6  I   5.2
                       I   3.5  I   5.4  I  14.9  I
                       I   2.1  I   1.7  I   1.4  I
                      -I--------I--------I--------I
                  10.  I    40  I    12  I     0  I    52
   INTERDISCIPLINAR    I  76.9  I  23.1  I   0.0  I   2.2
                       I   2.8  I   1.6  I   0.0  I
                       I   1.7  I   0.5  I   0.0  I
                      -I--------I--------I--------I
               COLUMN     1437      735      222     2394
                TOTAL     60.0     30.7      9.3    100.0

      1 OUT OF     30 (  3.3%) OF THE VALID CELLS HAVE EXPECTED CELL FREQUENCY LESS THAN 5.0.
MINIMUM EXPECTED CELL FREQUENCY =  4.822
CHI SQUARE =    236.87985 WITH  18 DEGREES OF FREEDOM    SIGNIFICANCE =  0.0
PEARSON'S R = 0.10581  SIGNIFICANCE =  0.0000

NUMBER OF MISSING OBSERVATIONS =     1587
```

```
CLR NON-USER QUESTIONNAIRE: LIBRARY TYPE COMPARISON XTABS                        08/05/82        PAGE   32

FILE   NUQSYS   (CREATION DATE = 08/03/82)

* * * * * * * * * * * *  C R O S S T A B U L A T I O N  * * * * * * * * * * * *
   RQUEST14 (TABULATING     1) THE MAIN FOCUS OF MY ACADEMIC WORK IS:
BY LIBTYPE  LIBRARY GROUPING BY TYPE OF LIBRARY
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * PAGE   1 OF   1

                              LIBTYPE

                      COUNT  IARL LIBS OTHER AC COMMUNIT
                     ROW PCT I         ADEMIC   Y COLLEG   ROW
                     COL PCT I                  E          TOTAL
                             I     1  I     2  I     3  I
RQUEST14             --------I--------I--------I--------I
                RQ14A        I  1195  I   628  I   201  I   2024
  COURSE WORK                I  59.0  I  31.0  I   9.9  I   84.3
                             I  83.4  I  84.3  I  89.7  I
                             I--------I--------I--------I
                RQ14B        I    75  I    50  I     1  I    126
  TEACHING                   I  59.5  I  39.7  I   0.8  I    5.2
                             I   5.2  I   6.7  I   0.4  I
                             I--------I--------I--------I
                RQ14C        I   325  I   154  I    44  I    523
  RESEARCH                   I  62.1  I  29.4  I   8.4  I   21.8
                             I  22.7  I  20.7  I  19.6  I
                             I--------I--------I--------I
                      COLUMN    1433      745      224      2402
                       TOTAL    59.7     31.0      9.3     100.0

PERCENTS AND TOTALS BASED ON RESPONDENTS

   2402 VALID CASES        1579 MISSING CASES
```

```
CLR NON-USER QUESTIONNAIRE: LIBRARY TYPE COMPARISON XTABS                      08/05/82        PAGE   34

FILE    NUQSYS    (CREATION DATE = 08/03/82)

* * * * * * * * * * * * * * * * * * * * * *   C R O S S T A B U L A T I O N   O F   * * * * * * * * * * * * * * * * *
    RQ15       PRESENT AFFILIATION                                 BY  LIBTYPE   LIBRARY GROUPING BY TYPE OF LIBRARY
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * PAGE  1 OF  2

                     LIBTYPE
              COUNT I
            ROW PCT IARL LIBS OTHER AC COMMUNIT    ROW
            COL PCT I         ADEMIC   Y COLLEG   TOTAL
            TOT PCT I      1.I      2.I      3.I
RQ15        --------I--------I--------I--------I
                 1. I   425  I   242  I   173  I    840
  FRESHMAN-SOPHOM   I  50.6  I  28.8  I  20.6  I   34.8
                    I  29.2  I  32.7  I  77.9  I
                    I  17.6  I  10.0  I   7.2  I
                   -I--------I--------I--------I
                 2. I   518  I   346  I    10  I    874
  JUNIOR--SENIOR    I  59.3  I  39.6  I   1.1  I   36.2
                    I  35.6  I  46.8  I   4.5  I
                    I  21.4  I  14.3  I   0.4  I
                   -I--------I--------I--------I
                 3. I   156  I    69  I     2  I    227
  GRADUATE-MASTERS  I  68.7  I  30.4  I   0.9  I    9.4
                    I  10.7  I   9.3  I   0.9  I
                    I   6.5  I   2.9  I   0.1  I
                   -I--------I--------I--------I
                 4. I   108  I    21  I     0  I    129
  GRADUATE-DOCTORA  I  83.7  I  16.3  I   0.0  I    5.3
                    I   7.4  I   2.8  I   0.0  I
                    I   4.5  I   0.9  I   0.0  I
                   -I--------I--------I--------I
                 5. I    60  I     5  I     4  I     69
  GRADUATE-PROFESS  I  87.0  I   7.2  I   5.8  I    2.9
                    I   4.1  I   0.7  I   1.8  I
                    I   2.5  I   0.2  I   0.2  I
                   -I--------I--------I--------I
                 6. I    29  I     8  I     0  I     37
  FACULTY           I  78.4  I  21.6  I   0.0  I    1.5
                    I   2.0  I   1.1  I   0.0  I
                    I   1.2  I   0.3  I   0.0  I
                   -I--------I--------I--------I
                 7. I    21  I     3  I     0  I     24
  STAFF             I  87.5  I  12.5  I   0.0  I    1.0
                    I   1.4  I   0.4  I   0.0  I
                    I   0.9  I   0.1  I   0.0  I
                   -I--------I--------I--------I
             COLUMN    1454      740      222      2416
              TOTAL    60.2     30.6      9.2     100.0
(CONTINUED)
```

```
CLR NON-USER QUESTIONNAIRE: LIBRARY TYPE COMPARISON XTABS                         08/05/82        PAGE   35

FILE    NUQSYS    (CREATION DATE = 08/03/82)

* * * * * * * * * * * * * * * * * * *   C R O S S T A B U L A T I O N   O F   * * * * * * * * * * * * * * * * * * *
   RQ15       PRESENT AFFILIATION                                  BY  LIBTYPE   LIBRARY GROUPING BY TYPE OF LIBRARY
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * PAGE  2 OF  2

                        LIBTYPE
               COUNT   I
              ROW PCT  IARL LIBS OTHER AC COMMUNIT   ROW
              COL PCT  I         ADEMIC   Y COLLEG  TOTAL
              TOT PCT  I      1.I      2.I      3.I
RQ15          --------I--------I--------I--------I
                   8.  I   137  I    46  I    33  I    216
   OTHER               I  63.4  I  21.3  I  15.3  I    8.9
                       I   9.4  I   6.2  I  14.9  I
                       I   5.7  I   1.9  I   1.4  I
                      -I--------I--------I--------I
              COLUMN      1454      740      222      2416
               TOTAL      60.2     30.6      9.2     100.0

     2 OUT OF     24 (  8.3%) OF THE VALID CELLS HAVE EXPECTED CELL FREQUENCY LESS THAN 5.0.
MINIMUM EXPECTED CELL FREQUENCY =  2.205
CHI SQUARE =    320.26929 WITH  14 DEGREES OF FREEDOM   SIGNIFICANCE =  0.0
PEARSON'S R =-0.12423  SIGNIFICANCE =  0.0000

NUMBER OF MISSING OBSERVATIONS =      1565
```

Appendix G

USER AND NON-USER RESPONSES TO SHARED QUESTIONS

This appendix includes computer listings of questionnaire data from the Statistical Package for the Social Sciences (SPSS). Page numbering in this appendix is that of the original computer listings, and does not correspond to the numbering for the report as a whole. Page references in the text are to the internal numbers in this appendix.

```
COMBINED USER-NONUSER DATA: AGGREGATE CROSSTABS                                 08/04/82        PAGE   16

FILE   CMBALA   (CREATION DATE = 08/04/82)

* * * * * * * * * * * * * * * * * * * * *  C R O S S T A B U L A T I O N   O F  * * * * * * * * * * * * * * * * * * * *
    JNT1      GENERAL ATTITUDE TOWARD COMPUTER CAT IS      BY  USERTYPE  SOURCE QUESTIONNAIRE FOR COMBINED DATA
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *  PAGE  1 OF  1

                      USERTYPE
              COUNT  I
            ROW PCT  IUSERS     NON - US   ROW
            COL PCT  I          ERS        TOTAL
            TOT PCT  I       1.I       2.I
JNT1       --------I---------I---------I
                 1.  I  5174   I  1745   I   6919
  VERY FAVORABLE     I  74.8   I  25.2   I   60.1
                     I  67.0   I  45.9   I
                     I  44.9   I  15.2   I
                    -I---------I---------I
                 2.  I  1962   I  1644   I   3606
  SOMEWHAT FAVORAB   I  54.4   I  45.6   I   31.3
                     I  25.4   I  43.3   I
                     I  17.0   I  14.3   I
                    -I---------I---------I
                 3.  I   406   I   318   I    724
  SOMEWHAT UNFAVOR   I  56.1   I  43.9   I    6.3
                     I   5.3   I   8.4   I
                     I   3.5   I   2.8   I
                    -I---------I---------I
                 4.  I   177   I    91   I    268
  VERY    UNFAVORA   I  66.0   I  34.0   I    2.3
                     I   2.3   I   2.4   I
                     I   1.5   I   0.8   I
                    -I---------I---------I
             COLUMN     7719      3798      11517
              TOTAL     67.0      33.0      100.0

CHI SQUARE =    487.28271 WITH   3 DEGREES OF FREEDOM   SIGNIFICANCE =  0.0
PEARSON'S R = 0.15983  SIGNIFICANCE =  0.0000

NUMBER OF MISSING OBSERVATIONS =      558
```

```
COMBINED USER-NONUSER DATA: AGGREGATE CROSSTABS                                  08/04/82        PAGE   17

FILE   CMBALA   (CREATION DATE = 08/04/82)

* * * * * * * * * * * * * * * * * * * *   C R O S S T A B U L A T I O N   O F   * * * * * * * * * * * * * * * * * * * *
   JNT2      COMPUTER CAT COMPARED TO OTHER CAT          BY  USERTYPE  SOURCE QUESTIONNAIRE FOR COMBINED DATA
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *  PAGE  1 OF  1

                     USERTYPE
              COUNT  I
            ROW PCT  IUSERS     NON - US   ROW
            COL PCT  I          ERS        TOTAL
            TOT PCT  I      1.I      2.I
JNT2        ---------I--------I--------I
                 1.  I  5305  I  1224  I   6529
  BETTER             I  81.3  I  18.7  I   57.8
                     I  69.1  I  33.8  I
                     I  47.0  I  10.8  I
                    -I--------I--------I
                 2.  I  1177  I   582  I   1759
  EQUAL              I  66.9  I  33.1  I   15.6
                     I  15.3  I  16.1  I
                     I  10.4  I   5.2  I
                    -I--------I--------I
                 3.  I   638  I   140  I    778
  WORSE              I  82.0  I  18.0  I    6.9
                     I   8.3  I   3.9  I
                     I   5.6  I   1.2  I
                    -I--------I--------I
                 4.  I   559  I  1672  I   2231
  CAN'T   DECIDE     I  25.1  I  74.9  I   19.7
                     I   7.3  I  46.2  I
                     I   4.9  I  14.8  I
                    -I--------I--------I
             COLUMN     7679     3618     11297
              TOTAL     68.0     32.0     100.0

CHI SQUARE =  2487.79663 WITH   3 DEGREES OF FREEDOM   SIGNIFICANCE =  0.0
PEARSON'S R = 0.42498  SIGNIFICANCE =  0.0000

NUMBER OF MISSING OBSERVATIONS =      778
```

```
COMBINED USER-NONUSER DATA: AGGREGATE CROSSTABS                              08/04/82        PAGE   18

FILE   CMBALA   (CREATION DATE = 08/04/82)

* * * * * * * * * * * * * * * * * * *   C R O S S T A B U L A T I O N   O F   * * * * * * * * * * * * * * * * * * *
    JNT3       I COME TO THIS LIBRARY                              BY  USERTYPE  SOURCE QUESTIONNAIRE FOR COMBINED DATA
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * PAGE  1 OF  1

                     USERTYPE
               COUNT  I
             ROW PCT  IUSERS     NON - US   ROW
             COL PCT  I          ERS        TOTAL
             TOT PCT  I       1.I       2.I
JNT3         --------I--------I--------I
                   1.  I  1921  I  1036  I  2957
  DAILY                I  65.0  I  35.0  I  26.0
                       I  25.8  I  26.5  I
                       I  16.9  I   9.1  I
                      -I--------I--------I
                   2.  I  3163  I  1268  I  4431
  WEEKLY               I  71.4  I  28.6  I  39.0
                       I  42.4  I  32.4  I
                       I  27.8  I  11.2  I
                      -I--------I--------I
                   3.  I  1374  I   661  I  2035
  MONTHLY              I  67.5  I  32.5  I  17.9
                       I  18.4  I  16.9  I
                       I  12.1  I   5.8  I
                      -I--------I--------I
                   4.  I   550  I   426  I   976
  4 TIMES YEAR         I  56.4  I  43.6  I   8.6
                       I   7.4  I  10.9  I
                       I   4.8  I   3.7  I
                      -I--------I--------I
                   5.  I   123  I   154  I   277
  ONCE A  YEAR         I  44.4  I  55.6  I   2.4
                       I   1.7  I   3.9  I
                       I   1.1  I   1.4  I
                      -I--------I--------I
                   6.  I   321  I   365  I   686
  NOT BEFORE TODAY     I  46.8  I  53.2  I   6.0
                       I   4.3  I   9.3  I
                       I   2.8  I   3.2  I
                      -I--------I--------I
              COLUMN      7452      3910     11362
               TOTAL      65.6      34.4     100.0

CHI SQUARE =    269.13013 WITH    5 DEGREES OF FREEDOM    SIGNIFICANCE =  0.0
PEARSON'S R = 0.11231  SIGNIFICANCE =  0.0000

NUMBER OF MISSING OBSERVATIONS =       713
```

```
COMBINED USER-NONUSER DATA: AGGREGATE CROSSTABS                                     08/04/82        PAGE   19

FILE  CMBALA   (CREATION DATE = 08/04/82)

* * * * * * * * * * * * * * * * * * * *   C R O S S T A B U L A T I O N   O F   * * * * * * * * * * * * * * * * * * * *
   RJ4       I USE LIBRARY'S OTHER CATALOGS                BY  USERTYPE  SOURCE QUESTIONNAIRE FOR COMBINED DATA
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * PAGE  1 OF  1

                   USERTYPE
            COUNT  I
          ROW PCT  IUSERS     NON - US   ROW
          COL PCT  I          ERS        TOTAL
          TOT PCT  I      1.I      2.I
RJ4       --------I--------I--------I
               0.  I   654  I    86  I    740
                   I  88.4  I  11.6  I    6.1
                   I   8.1  I   2.2  I
                   I   5.4  I   0.7  I
                  -I--------I--------I
               1.  I   870  I   355  I   1225
  EVERY    VISIT   I  71.0  I  29.0  I   10.1
                   I  10.7  I   8.9  I
                   I   7.2  I   2.9  I
                  -I--------I--------I
               2.  I  1492  I   557  I   2049
  MOST     VISITS  I  72.8  I  27.2  I   17.0
                   I  18.4  I  14.0  I
                   I  12.4  I   4.6  I
                  -I--------I--------I
               3.  I  2418  I  1155  I   3573
  OCCASIONALLY     I  67.7  I  32.3  I   29.6
                   I  29.9  I  29.0  I
                   I  20.0  I   9.6  I
                  -I--------I--------I
               4.  I  1495  I   928  I   2423
  RARELY           I  61.7  I  38.3  I   20.1
                   I  18.5  I  23.3  I
                   I  12.4  I   7.7  I
                  -I--------I--------I
               5.  I   750  I   670  I   1420
  NOT BEFORE TODAY I  52.8  I  47.2  I   11.8
                   I   9.3  I  16.8  I
                   I   6.2  I   5.5  I
                  -I--------I--------I
              99.  I   415  I   230  I    645
  NOT APPLICABLE   I  64.3  I  35.7  I    5.3
                   I   5.1  I   5.8  I
                   I   3.4  I   1.9  I
                  -I--------I--------I
           COLUMN     8094     3981     12075
            TOTAL     67.0     33.0     100.0

CHI SQUARE =   356.20239 WITH   6 DEGREES OF FREEDOM   SIGNIFICANCE =  0.0
```

```
COMBINED USER-NONUSER DATA: AGGREGATE CROSSTABS                                          08/04/82        PAGE  21

FILE   CMBALA   (CREATION DATE = 08/04/82)

* * * * * * * * * * * * * * * * * * * *   C R O S S T A B U L A T I O N   O F   * * * * * * * * * * * * * * * * * *
    JNT5      I USE ANOTHER COMPUTER SYSTEM                  BY  USERTYPE  SOURCE QUESTIONNAIRE FOR COMBINED DATA
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * PAGE  1 OF  1

                     USERTYPE
            COUNT  I
          ROW PCT  IUSERS     NON - US   ROW
          COL PCT  I          ERS        TOTAL
          TOT PCT  I      1.I       2.I
JNT5      --------I--------I--------I
               1.  I   965  I   325  I   1290
  DAILY            I  74.8  I  25.2  I   11.4
                   I  13.0  I   8.4  I
                   I   8.6  I   2.9  I
                  -I--------I--------I
               2.  I  1240  I   491  I   1731
  WEEKLY           I  71.6  I  28.4  I   15.3
                   I  16.7  I  12.7  I
                   I  11.0  I   4.4  I
                  -I--------I--------I
               3.  I   964  I   408  I   1372
  MONTHLY          I  70.3  I  29.7  I   12.2
                   I  13.0  I  10.5  I
                   I   8.5  I   3.6  I
                  -I--------I--------I
               4.  I   880  I   353  I   1233
  4 TIMES A YEAR   I  71.4  I  28.6  I   10.9
                   I  11.9  I   9.1  I
                   I   7.8  I   3.1  I
                  -I--------I--------I
               5.  I   671  I   345  I   1016
  ONCE A  YEAR     I  66.0  I  34.0  I    9.0
                   I   9.1  I   8.9  I
                   I   5.9  I   3.1  I
                  -I--------I--------I
               6.  I  2690  I  1953  I   4643
  NEVER            I  57.9  I  42.1  I   41.1
                   I  36.3  I  50.4  I
                   I  23.8  I  17.3  I
                  -I--------I--------I
           COLUMN     7410     3875     11285
            TOTAL     65.7     34.3     100.0

CHI SQUARE =   228.89285 WITH   5 DEGREES OF FREEDOM   SIGNIFICANCE =  0.0
PEARSON'S R = 0.13379  SIGNIFICANCE =  0.0000

NUMBER OF MISSING OBSERVATIONS =     790
```

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COMBINED USER-NONUSER DATA: AGGREGATE CROSSTABS                          08/04/82        PAGE   22

FILE   CMBALA   (CREATION DATE = 08/04/82)

* * * * * * * * * * * * * * * * * * * *   C R O S S T A B U L A T I O N   O F   * * * * * * * * * * * * * * * * * * * *
   JNT6      MY AGE GROUP IS                                    BY  USERTYPE  SOURCE QUESTIONNAIRE FOR COMBINED DATA
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *  PAGE  1 OF  2

                    USERTYPE
           COUNT  I
         ROW PCT  IUSERS     NON - US   ROW
         COL PCT  I          ERS        TOTAL
         TOT PCT  I      1.I      2.I
JNT6     --------I--------I--------I
              1.  I   134  I    20  I    154
  14 AND  UNDER   I  87.0  I  13.0  I    1.4
                  I   1.8  I   0.5  I
                  I   1.2  I   0.2  I
                 -I--------I--------I
              2.  I  1458  I   688  I   2146
  15 - 19 YEARS   I  67.9  I  32.1  I   18.9
                  I  19.6  I  17.5  I
                  I  12.8  I   6.0  I
                 -I--------I--------I
              3.  I  2813  I  1583  I   4396
  20 - 24 YEARS   I  64.0  I  36.0  I   38.6
                  I  37.8  I  40.3  I
                  I  24.7  I  13.9  I
                 -I--------I--------I
              4.  I  1978  I   884  I   2862
  25 - 34 YEARS   I  69.1  I  30.9  I   25.2
                  I  26.6  I  22.5  I
                  I  17.4  I   7.8  I
                 -I--------I--------I
              5.  I   681  I   347  I   1028
  35 - 44 YEARS   I  66.2  I  33.8  I    9.0
                  I   9.1  I   8.8  I
                  I   6.0  I   3.0  I
                 -I--------I--------I
              6.  I   222  I   185  I    407
  45 - 54 YEARS   I  54.5  I  45.5  I    3.6
                  I   3.0  I   4.7  I
                  I   2.0  I   1.6  I
                 -I--------I--------I
              7.  I    98  I   127  I    225
  55 - 64 YEARS   I  43.6  I  56.4  I    2.0
                  I   1.3  I   3.2  I
                  I   0.9  I   1.1  I
                 -I--------I--------I
         COLUMN      7447      3931     11378
          TOTAL      65.5      34.5     100.0
(CONTINUED)
```

```
COMBINED USER-NONUSER DATA: AGGREGATE CROSSTABS                                    08/04/82        PAGE   23

FILE    CMBALA    (CREATION DATE = 08/04/82)

* * * * * * * * * * * * * * * * * * *   C R O S S T A B U L A T I O N   O F   * * * * * * * * * * * * * * * * * * *
    JNT6      MY AGE GROUP IS                                 BY  USERTYPE  SOURCE QUESTIONNAIRE FOR COMBINED DATA
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * PAGE  2 OF  2

                          USERTYPE
                  COUNT  I
                ROW PCT  IUSERS     NON - US   ROW
                COL PCT  I          ERS        TOTAL
                TOT PCT  I      1.I      2.I
JNT6            --------I--------I--------I
                     8.  I    63  I    97  I    160
   65 AND  OVER          I  39.4  I  60.6  I    1.4
                         I   0.8  I   2.5  I
                         I   0.6  I   0.9  I
                        -I--------I--------I
                 COLUMN     7447     3931     11378
                  TOTAL     65.5     34.5     100.0

CHI SQUARE =    176.16780 WITH    7 DEGREES OF FREEDOM    SIGNIFICANCE =  0.0
PEARSON'S R = 0.07802  SIGNIFICANCE =  0.0000

NUMBER OF MISSING OBSERVATIONS =      697
```

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COMBINED USER-NONUSER DATA: AGGREGATE CROSSTABS                           08/04/82        PAGE   24

FILE    CMBALA    (CREATION DATE = 08/04/82)

* * * * * * * * * * * * * * * * * * *   C R O S S T A B U L A T I O N   O F   * * * * * * * * * * * * * * * * * * *
   JNT7      SEX                                                 BY  USERTYPE  SOURCE QUESTIONNAIRE FOR COMBINED DATA
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *  PAGE  1 OF  1

                    USERTYPE
            COUNT  I
           ROW PCT IUSERS     NON - US   ROW
           COL PCT I          ERS        TOTAL
           TOT PCT I      1.I      2.I
JNT7       --------I--------I--------I
                1.  I  2953  I  1869  I  4822
  FEMALE            I  61.2  I  38.8  I  42.8
                    I  40.1  I  47.9  I
                    I  26.2  I  16.6  I
                   -I--------I--------I
                2.  I  4414  I  2031  I  6445
  MALE              I  68.5  I  31.5  I  57.2
                    I  59.9  I  52.1  I
                    I  39.2  I  18.0  I
                   -I--------I--------I
           COLUMN      7367     3900    11267
            TOTAL      65.4     34.6    100.0

CORRECTED CHI SQUARE =     63.68687 WITH 1 DEGREE OF FREEDOM.  SIGNIFICANCE =  0.0000
      RAW CHI SQUARE =     64.00690 WITH 1 DEGREE OF FREEDOM.  SIGNIFICANCE =  0.0000
PEARSON'S R =-0.07536  SIGNIFICANCE =  0.0000

NUMBER OF MISSING OBSERVATIONS =     808
```

```
COMBINED USER-NONUSER DATA: AGGREGATE CROSSTABS                                 08/04/82        PAGE   25

FILE    CMBALA    (CREATION DATE = 08/04/82)

* * * * * * * * * * * * * * * * * * *   C R O S S T A B U L A T I O N   O F   * * * * * * * * * * * * * * * * * * *
    JNT8      CURRENT OR HIGHEST GRADE COMPLETED          BY  USERTYPE  SOURCE QUESTIONNAIRE FOR COMBINED DATA
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *  PAGE  1 OF  1

                      USERTYPE

               COUNT  I
             ROW PCT  IUSERS     NON - US   ROW
             COL PCT  I          ERS        TOTAL
             TOT PCT  I        1.I       2.I
JNT8         --------I---------I---------I
                  1.  I    74   I    27   I    101
  GRADE     SCHOOL    I  73.3   I  26.7   I    0.9
                      I   1.0   I   0.7   I
                      I   0.7   I   0.2   I
                     -I---------I---------I
                  2.  I   668   I   319   I    987
  HIGH      SCHOOL    I  67.7   I  32.3   I    8.7
                      I   9.0   I   8.1   I
                      I   5.9   I   2.8   I
                     -I---------I---------I
                  3.  I  3431   I  2096   I   5527
  SOME      COLLEGE   I  62.1   I  37.9   I   48.7
                      I  46.2   I  53.4   I
                      I  30.2   I  18.5   I
                     -I---------I---------I
                  4.  I  3251   I  1481   I   4732
  COLLEGE GRADUATE    I  68.7   I  31.3   I   41.7
                      I  43.8   I  37.8   I
                      I  28.7   I  13.1   I
                     -I---------I---------I
              COLUMN     7424      3923      11347
               TOTAL     65.4      34.6      100.0

CHI SQUARE =     54.82275 WITH    3 DEGREES OF FREEDOM   SIGNIFICANCE =  0.0000
PEARSON'S R =-0.03258  SIGNIFICANCE =  0.0003

NUMBER OF MISSING OBSERVATIONS =      728
```

```
FILE   CMBALA   (CREATION DATE = 08/04/82)

* * * * * * * * * * * * * * * * * * * *   C R O S S T A B U L A T I O N   O F   * * * * * * * * * * * * * * * * * * * *
   RJ9      MY ACADEMIC AREA IS                                 BY  USERTYPE  SOURCE QUESTIONNAIRE FOR COMBINED DATA
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *  PAGE  1 OF  2

                   USERTYPE
             COUNT  I
           ROW PCT  IUSERS     NON - US    ROW
           COL PCT  I          ERS         TOTAL
           TOT PCT  I       1.I       2.I
RJ9        --------I---------I---------I
                0.  I   661   I   127   I    788
                    I  83.9   I  16.1   I    6.5
                    I   8.2   I   3.2   I
                    I   5.5   I   1.1   I
                   -I---------I---------I
                1.  I  1266   I   367   I   1633
  ART & HUMANITIES  I  77.5   I  22.5   I   13.5
                    I  15.6   I   9.2   I
                    I  10.5   I   3.0   I
                   -I---------I---------I
                2.  I   564   I   283   I    847
  PHYS-BIO SCIENCE  I  66.6   I  33.4   I    7.0
                    I   7.0   I   7.1   I
                    I   4.7   I   2.3   I
                   -I---------I---------I
                3.  I   854   I   300   I   1154
  SOCIAL  SCIENCES  I  74.0   I  26.0   I    9.6
                    I  10.6   I   7.5   I
                    I   7.1   I   2.5   I
                   -I---------I---------I
                4.  I   645   I   528   I   1173
  BUSINESS-MANAGEM  I  55.0   I  45.0   I    9.7
                    I   8.0   I  13.3   I
                    I   5.3   I   4.4   I
                   -I---------I---------I
                5.  I   267   I   122   I    389
  EDUCATION         I  68.6   I  31.4   I    3.2
                    I   3.3   I   3.1   I
                    I   2.2   I   1.0   I
                   -I---------I---------I
                6.  I   578   I   365   I    943
  ENGINEERING       I  61.3   I  38.7   I    7.8
                    I   7.1   I   9.2   I
                    I   4.8   I   3.0   I
                   -I---------I---------I
            COLUMN     8094      3981      12075
             TOTAL     67.0      33.0      100.0
(CONTINUED)
```

```
COMBINED USER-NONUSER DATA: AGGREGATE CROSSTABS                                          08/04/82        PAGE   27

FILE    CMBALA    (CREATION DATE = 08/04/82)

* * * * * * * * * * * * * * * * * * * * *   C R O S S T A B U L A T I O N   O F   * * * * * * * * * * * * * * * * * * * * *
    RJ9       MY ACADEMIC AREA IS                                BY  USERTYPE  SOURCE QUESTIONNAIRE FOR COMBINED DATA
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *  PAGE  2 OF  2

                      USERTYPE
                COUNT I
              ROW PCT IUSERS     NON - US    ROW
              COL PCT I          ERS         TOTAL
              TOT PCT I       1.I       2.I
RJ9           --------I--------I--------I
                   7. I   270  I   196  I    466
  MEDICAL-HEALTH      I  57.9  I  42.1  I    3.9
                      I   3.3  I   4.9  I
                      I   2.2  I   1.6  I
                     -I--------I--------I
                   8. I    95  I    57  I    152
  LAW                 I  62.5  I  37.5  I    1.3
                      I   1.2  I   1.4  I
                      I   0.8  I   0.5  I
                     -I--------I--------I
                   9. I   167  I   124  I    291
  MAJOR UNDECLARED    I  57.4  I  42.6  I    2.4
                      I   2.1  I   3.1  I
                      I   1.4  I   1.0  I
                     -I--------I--------I
                  10. I   150  I    52  I    202
  INTERDISCIPLINAR    I  74.3  I  25.7  I    1.7
                      I   1.9  I   1.3  I
                      I   1.2  I   0.4  I
                     -I--------I--------I
                  99. I  2577  I  1460  I   4037
  NOT APPLICABLE      I  63.8  I  36.2  I   33.4
                      I  31.8  I  36.7  I
                      I  21.3  I  12.1  I
                     -I--------I--------I
               COLUMN    8094     3981     12075
                TOTAL    67.0     33.0     100.0

CHI SQUARE =   354.12769 WITH  11 DEGREES OF FREEDOM   SIGNIFICANCE =  0.0
PEARSON'S R = 0.05346  SIGNIFICANCE =  0.0000
```

```
FILE   CMBALA   (CREATION DATE = 08/04/82)

* * * * * * * * * * * *  C R O S S T A B U L A T I O N  * * * * * * * * * * * *
   RJOINT10 (TABULATING      1) THE MAIN FOCUS OF MY ACADEMIC WORK IS:
BY USERTYPE SOURCE QUESTIONNAIRE FOR COMBINED DATA
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * PAGE   1 OF   1

                          USERTYPE

                   COUNT  IUSERS    NON - US
                 ROW PCT I          ERS        ROW
                 COL PCT I                     TOTAL
                         I      1 I      2 I
RJOINT10        --------I--------I--------I
             RJ10A       I  3565  I  2024  I   5589
  COURSE WORK            I  63.8  I  36.2  I   77.7
                         I  74.4  I  84.3  I
                         I--------I--------I
             RJ10B       I   456  I   126  I    582
  TEACHING               I  78.4  I  21.6  I    8.1
                         I   9.5  I   5.2  I
                         I--------I--------I
             RJ10C       I  1807  I   523  I   2330
  RESEARCH               I  77.6  I  22.4  I   32.4
                         I  37.7  I  21.8  I
                         I--------I--------I
                 COLUMN     4789     2402      7191
                  TOTAL     66.6     33.4     100.0

PERCENTS AND TOTALS BASED ON RESPONDENTS

   7191 VALID CASES         4884 MISSING CASES
```

```
COMBINED USER-NONUSER DATA: AGGREGATE CROSSTABS                                  08/04/82        PAGE   31

FILE    CMBALA    (CREATION DATE = 08/04/82)

* * * * * * * * * * * * * * * * * * *   C R O S S T A B U L A T I O N   O F   * * * * * * * * * * * * * * * * * *
    RJ11       PRESENT AFFILIATION                                 BY  USERTYPE  SOURCE QUESTIONNAIRE FOR COMBINED DATA
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *  PAGE  1 OF  2

                        USERTYPE
               COUNT   I
             ROW PCT   IUSERS      NON - US    ROW
             COL PCT   I           ERS         TOTAL
             TOT PCT   I       1.I       2.I
RJ11         --------I--------I--------I
                  0.   I   766   I   105   I    871
                       I  87.9   I  12.1   I    7.2
                       I   9.5   I   2.6   I
                       I   6.3   I   0.9   I
                      -I--------I--------I
                  1.   I  1223   I   840   I   2063
  FRESHMAN-SOPHOM      I  59.3   I  40.7   I   17.1
                       I  15.1   I  21.1   I
                       I  10.1   I   7.0   I
                      -I--------I--------I
                  2.   I  1618   I   874   I   2492
  JUNIOR--SENIOR       I  64.9   I  35.1   I   20.6
                       I  20.0   I  22.0   I
                       I  13.4   I   7.2   I
                      -I--------I--------I
                  3.   I   637   I   227   I    864
  GRADUATE-MASTERS     I  73.7   I  26.3   I    7.2
                       I   7.9   I   5.7   I
                       I   5.3   I   1.9   I
                      -I--------I--------I
                  4.   I   461   I   129   I    590
  GRADUATE-DOCTORA     I  78.1   I  21.9   I    4.9
                       I   5.7   I   3.2   I
                       I   3.8   I   1.1   I
                      -I--------I--------I
                  5.   I   110   I    69   I    179
  GRADUATE-PROFESS     I  61.5   I  38.5   I    1.5
                       I   1.4   I   1.7   I
                       I   0.9   I   0.6   I
                      -I--------I--------I
                  6.   I   189   I    37   I    226
  FACULTY              I  83.6   I  16.4   I    1.9
                       I   2.3   I   0.9   I
                       I   1.6   I   0.3   I
                      -I--------I--------I
              COLUMN      8094      3981      12075
               TOTAL      67.0      33.0      100.0
(CONTINUED)
```

```
COMBINED USER-NONUSER DATA: AGGREGATE CROSSTABS                             08/04/82        PAGE   32

FILE   CMBALA   (CREATION DATE = 08/04/82)

* * * * * * * * * * * * * * * * * * * *  C R O S S T A B U L A T I O N   O F  * * * * * * * * * * * * * * * * * * * *
   RJ11      PRESENT AFFILIATION                                   BY  USERTYPE  SOURCE QUESTIONNAIRE FOR COMBINED DATA
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *  PAGE  2 OF  2

                      USERTYPE

                COUNT  I
              ROW PCT  IUSERS     NON - US    ROW
              COL PCT  I          ERS         TOTAL
              TOT PCT  I       1.I       2.I
RJ11          --------I--------I--------I
                   7.  I   133  I    24  I     157
  STAFF                I  84.7  I  15.3  I     1.3
                       I   1.6  I   0.6  I
                       I   1.1  I   0.2  I
                      -I--------I--------I
                   8.  I   380  I   216  I     596
  OTHER                I  63.8  I  36.2  I     4.9
                       I   4.7  I   5.4  I
                       I   3.1  I   1.8  I
                      -I--------I--------I
                  99.  I  2577  I  1460  I    4037
  NOT APPLICABLE       I  63.8  I  36.2  I    33.4
                       I  31.8  I  36.7  I
                       I  21.3  I  12.1  I
                      -I--------I--------I
               COLUMN     8094     3981      12075
                TOTAL     67.0     33.0      100.0

CHI SQUARE =   358.32715 WITH   9 DEGREES OF FREEDOM   SIGNIFICANCE =  0.0
PEARSON'S R = 0.04792  SIGNIFICANCE =  0.0000
```

Appendix H

QUESTIONNAIRE MARK-UPS AND DATA CORRECTION METHODS

To remove from the analysis "spurious" user responses about features not supported by a particular system (which responses would bias the legitimate responses from users of systems that did support the feature), we asked the staff of each system to identify the questions on the User Questionnaire that were irrelevant to that system. SPSS code was written so that all "spurious" responses for a particular system were automatically assigned a special missing value. The specific instructions for the "Questionnaire Mark-Up" were contained in a letter from the UC project manager to the other principal investigators, dated April 28, 1982. The relevant portion of that letter follows.

> "The *Computer Catalog Profiles* will be used to create variables for analysis as described in the Data Analysis Plan. However, a different approach will be used to eliminate spurious responses to questions that are not applicable to specific systems. Each participating library will be asked to mark on a copy of the questionnaire those questions that do not apply to its system (of the questions 11-42, 43h, and 44-46 on the User Questionnaire). Responses will be adjusted on the basis of these submissions."

The results of those mark-ups, as they affected the User and Non-User Questionnaire data, are shown on the following tables. A list of library codes used in this Appendix is included.

340

DATA EXCLUSIONS ON THE USER QUESTIONNAIRE
(Arranged by Library)

LIB	*QUEST*
DLA	QST3G
	QST3H
	QST14
	QST43H
	QST44A
	QST44B
	QST44C
AUS	QST43H
CLA	QST15
	QST26
EZA	QST3G
	QST3H
	QST14
	QST15
	QST22
	QST25
	QST26
	QST32
	QST43H
MAN	QST3G
	QST3H
	QST14
	QST43H
MIS	QST26
WVA	QST26
PIK	QST15
	QST26
OHI	QST19
	QST26
	QST28
	QST44D
	QST44K
	QST44M
	QST44N
	QST46A
	QST46B
	QST46D
	QST46G
	QST46K
IOW	QST43H
	QST44A
	QST44J
	QST46A
	QST46B
	QST46C
	QST46D
	QST46E
	QST46F
	QST46G
	QST46H
	QST46I
	QST46J
	QST46K
	QST46L
	QST46M
	QST50
	QST53F
DAL	QST19
	QST26
	QST31
	QST43H
	QST44J
	QST44M
	QST44N
	QST46B
	QST46G
	QST46K
	QST53F
SYR	QST19
	QST28
	QST43H
	QST46D
	QST53F
ATH	QST3E
	QST3F
	QST3G
	QST3H
	QST13
ATH	QST46A
	QST46B
	QST46C
	QST46D
	QST46E
	QST46F
	QST46G
	QST46H
	QST46I
	QST46J
	QST46K
	QST46L
	QST46M
	QST53F
AKR	QST3E
	QST3F
	QST3G
	QST3H
	QST13
	QST14
	QST17
	QST19
	QST26
	QST28
	QST43H
	QST44D
	QST46A
	QST46B
	QST46C
	QST46D
	QST46E
	QST46F
	QST46G
	QST46H
	QST46I
	QST46J
	QST46K
	QST46L
	QST46M
STA	QST17
	QST19
	QST26
	QST28
	QST44D
	QST46A
	QST46B
	QST46C
	QST46D
	QST46E
	QST46F
	QST46G
	QST46H
	QST46I
	QST46J
	QST46K
	QST46L
	QST46M
	QST50
	QST53F
UTD	QST3E
	QST3F
	QST3G
	QST3H
	QST13
	QST14
	QST17
	QST19
	QST26
	QST28
	QST44D
	QST44K
	QST46A
	QST46B
	QST46C
	QST46D
	QST46E
	QST46F
	QST46G
TCL	QST3E
	QST3F
	QST3G
	QST3H
	QST13
	QST14
	QST17
	QST19
	QST26
	QST28
	QST44D
	QST44K
	QST46A
	QST46B
	QST46C
	QST46D
	QST46E
	QST46F
	QST46G
	QST46H
	QST46I
	QST46J
	QST46K
	QST46L
	QST46M
	QST53F
LOC	QST44B
	QST44C
	QST44D
	QST44E
	QST44K
	QST45E
	QST46C
	QST46D
	QST46E
DAR	QST43H
NOR	QST15
	QST26
	QST43H

(Continued on Next Page)

LIB	QUEST	LIB	QUEST	LIB	QUEST	LIB	QUEST	LIB	QUEST
OHI	QST53F	ATH	QST14	AKR	QST53F	UTD	QST46H	NOR	QST46D
IOW	QST15		QST17	STA	QST3E		QST46I	SUL	QST36
	QST19		QST19		QST3F		QST46J		QST43H
	QST25		QST26		QST3G		QST46K		QST44B
	QST26		QST28		QST3H		QST46L		QST44J
	QST31		QST43H		QST13		QST46M		
	QST32		QST44D		QST14		QST53F		

DATA EXCLUSIONS ON THE NON-USER QUESTIONNAIRE
(Arranged by Library)

LIB	QUEST	LIB	QUEST	LIB	QUEST	LIB	QUEST	LIB	QUEST
STA	QST1I								
	QST1J								
	QST8								
IOW	QST1I								
	QST1J								
	QST8								

DATA EXCLUSIONS ON THE USER QUESTIONNAIRE
(Arranged by Question Number)

QUEST	*LIB*	*QUEST*	*LIB*	*QUEST*	*LIB*	*QUEST*	*LIB*	*QUEST*	*LIB*
RQ3E	ATH	RQ17	UTD	RQ43H	ATH	RQ46C	IOW	RQ46I	IOW
	AKR	RQ17	TCL	RQ43H	AKR	RQ46C	ATH	RQ46I	ATH
	STA	RQ19	OHI	RQ43H	DAR	RQ46C	AKR	RQ46I	AKR
	UTD	RQ19	IOW	RQ43H	NOR	RQ46C	STA	RQ46I	STA
	TCL	RQ19	DAL	RQ43H	SUL	RQ46C	UTD	RQ46I	UTD
RQ3F	ATH	RQ19	SYR	RQ44A	DLA	RQ46C	TCL	RQ46I	TCL
	AKR	RQ19	ATH	RQ44A	IOW	RQ46C	LOC	RQ46J	IOW
	STA	RQ19	AKR	RQ44B	DLA	RQ46D	PIK	RQ46J	ATH
	UTD	RQ19	STA	RQ44B	LOC	RQ46D	OHI	RQ46J	AKR
	TCL	RQ19	UTD	RQ44B	SUL	RQ46D	IOW	RQ46J	STA
RQ3G	DLA	RQ19	TCL	RQ44C	DLA	RQ46D	SYR	RQ46J	UTD
	EZA	RQ22	EZA	RQ44C	LOC	RQ46D	ATH	RQ46J	TCL
	MAN	RQ25	EZA	RQ44D	OHI	RQ46D	AKR	RQ46K	PIK
	ATH	RQ25	IOW	RQ44D	ATH	RQ46D	STA	RQ46K	OHI
	AKR	RQ26	CLA	RQ44D	AKR	RQ46D	UTD	RQ46K	IOW
	STA	RQ26	EZA	RQ44D	STA	RQ46D	TCL	RQ46K	DAL
	UTD	RQ26	MIS	RQ44D	UTD	RQ46D	LOC	RQ46K	ATH
	TCL	RQ26	WVA	RQ44D	TCL	RQ46D	NOR	RQ46K	AKR
RQ3H	DLA	RQ26	PIK	RQ44D	LOC	RQ46E	IOW	RQ46K	STA
	EZA	RQ26	OHI	RQ44E	LOC	RQ46E	ATH	RQ46K	UTD
	MAN	RQ26	IOW	RQ44J	IOW	RQ46E	AKR	RQ46K	TCL
	ATH	RQ26	DAL	RQ44J	DAL	RQ46E	STA	RQ46L	IOW
	AKR	RQ26	ATH	RQ44J	SUL	RQ46E	UTD	RQ46L	ATH
	STA	RQ26	AKR	RQ44K	OHI	RQ46E	TCL	RQ46L	AKR
	UTD	RQ26	STA	RQ44K	UTD	RQ46E	LOC	RQ46L	STA
	TCL	RQ26	UTD	RQ44K	TCL	RQ46F	IOW	RQ46L	UTD
RQ13	ATH	RQ26	TCL	RQ44K	LOC	RQ46F	ATH	RQ46L	TCL
RQ13	AKR	RQ26	NOR	RQ44M	OHI	RQ46F	AKR	RQ46M	IOW
RQ13	STA	RQ28	OHI	RQ44M	DAL	RQ46F	STA	RQ46M	ATH
RQ13	UTD	RQ28	SYR	RQ44N	OHI	RQ46F	UTD	RQ46M	AKR
RQ13	TCL	RQ28	ATH	RQ44N	DAL	RQ46F	TCL	RQ46M	STA
RQ14	DLA	RQ28	AKR	RQ45E	LOC	RQ46G	OHI	RQ46M	UTD
RQ14	EZA	RQ28	STA	RQ46A	OHI	RQ46G	IOW	RQ46M	TCL
RQ14	MAN	RQ28	UTD	RQ46A	IOW	RQ46G	DAL	RQ50	IOW
RQ14	ATH	RQ28	TCL	RQ46A	ATH	RQ46G	ATH	RQ50	STA
RQ14	AKR	RQ31	IOW	RQ46A	AKR	RQ46G	AKR	RQ53F	OHI
RQ14	STA	RQ31	DAL	RQ46A	STA	RQ46G	STA	RQ53F	IOW
RQ14	UTD	RQ32	EZA	RQ46A	UTD	RQ46G	UTD	RQ53F	DAL
RQ14	TCL	RQ32	IOW	RQ46A	TCL	RQ46G	TCL	RQ53F	SYR

(Continued on Next Page)

QUEST	*LIB*	*QUEST*	*LIB*	*QUEST*	*LIB*	*QUEST*	*LIB*	*QUEST*	*LIB*
RQ15	CLA	RQ36	SUL	RQ46B	OHI	RQ46H	PIK	RQ53F	ATH
RQ15	EZA	RQ43H	DLA	RQ46B	IOW	RQ46H	IOW	RQ53F	AKR
RQ15	PIK	RQ43H	AUS	RQ46B	DAL	RQ46H	ATH	RQ53F	STA
RQ15	IOW	RQ43H	EZA	RQ46B	ATH	RQ46H	AKR	RQ53F	UTD
RQ15	NOR	RQ43H	MAN	RQ46B	AKR	RQ46H	STA	RQ53F	TCL
RQ17	ATH	RQ43H	IOW	RQ46B	STA	RQ46H	UTD		
RQ17	AKR	RQ43H	DAL	RQ46B	UTD	RQ46H	TCL		
RQ17	STA	RQ43H	SYR	RQ46B	TCL	RQ46I	IOW		

Library Names and Codes

LIBRARY	CODE
AKRON	AKR
ATHENS	ATH
STEVEN F. AUSTIN	AUS
CLAREMONT	CLA
DALLAS PUBLIC	DAL
DARTMOUTH	DAR
UNIV OF CALIF	DLA
EVANSTON	EZA
IOWA CITY	IOW
LIBRARY OF CONGRESS	LOC
MANKATO	MAN
MISSION	MIS
NORTHWESTERN	NOR
OHIO STATE	OHI
PIKES PEAK	PIK
OHIO STATE LIBRARY	STA
STANFORD	SUL
SYRACUSE	SYR
UNIV TEXAS AUSTIN	TCL
UNIV TEXAS DALLAS	UTD
WEST VALLEY	WVA

Appendix I

MEMBERS OF THE PROJECT ADVISORY COMMITTEE

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Appendix J

THE COMPUTER SYSTEM PROFILE QUESTIONNAIRE

LIBRARY SYSTEM________________________________ DATE____________

1. Manufacturer and Model Number of CPU:

2. Amount of CPU memory (K) in bytes:

3. Model and number of disk drives:

4. Total amount of disk storage capacity (MB):

5. Name of operating system:

6. Name and vendor of database management system:

7. Name of application programming language(s):

8. Total number of Computer Catalog terminals attached directly to computer system:

9. Data transmission speed of Computer Catalog terminals attached directly to the computer system:

10. If dial-in access is provided, indicate number of ports and speeds of ports:

11. Number and location (branch and main) of library terminals:

COMPUTER CATALOG PROFILE (Continued)

12. Number of printers available to users (other than high speed printers):

13. Can some or all users request printing from a highspeed printer attached to the CPU?

14. Is the computer catalog a
    ( ) Computer Catalog only
    ( ) Combination Catalog and Circulation System
    ( ) Circulation system available for patron query
    ( ) Other (Please specify)

15. Does the system produce transaction logs of individual user sessions?

16. Of the features listed below, which are available to computer catalog users?

OPERATIONAL CONTROL
( ) Selection of function (Search, circulation, etc.)
( ) Interruption of on-line output
( ) Command stacking/multiple commands
( ) Correction of keying errors before command input (back space)

OUTPUT CONTROL
Number of display formats available ________
Can user select preferred display format? ______ (yes or no)
( ) Display forward and back
( ) Hard copy printed results available
( ) Sort capability

INFORMATION AND INSTRUCTION
( ) Instruction or assistance imbedded in dialogue
( ) Separate HELP displays available on request
( ) Related terms, index, or thesaurus available on-line

SEARCH FORMULATION AND CONTROL
( ) Expand or limit results by date
( ) Expand or limit results by language
( ) Expand or limit results by type of material
( ) Expand or limit results by ______________________ (please specify)
( ) Free text term or keyword searching available

COMPUTER CATALOG PROFILE (Continued)

( ) Use of Boolean operators (and, or, not)
( ) Proximity operators
( ) Ability to use truncated search terms
( ) Ability to create and save sets

( ) Ability to select or change search mode

TYPE OF COMMAND ENTRY LANGUAGE
( ) Formal command language
( ) Menu selection
( ) Other ____________________

ACCESS POINTS AVAILABLE
( ) Author
( ) Title
( ) Author/Title
( ) Subject
( ) Call Number
( ) Accession Number
( ) ISBN/ISSN
( ) LC Card Number
( ) Series
( ) Access by added entry
( ) Other (specify)

17. What is the total number of records in the Computer Catalog?

18. Type and percentage of records in the Computer Catalog:

RECORD TYPE	AS OF (DATE)	TOTAL NUMBER OF RECORDS IN LIBRARY	NUMBER OR % IN COMPUTER CATALOG
Monographs			
Journals or Magazines			
Newspapers			

COMPUTER CATALOG PROFILE (Continued)

Dissertations

Government Publications

Maps

Manuscripts

Music Scores

Phonograph Records

Tapes

Motion Picture Films

Technical Reports

Non-English Materials

Other (please specify)

19. Please check the status of other catalogs in the library.

	ACTIVE	CLOSED, MAINTAINED	CLOSED, NOT MAINTAINED	DOES NOT APPLY
Card Catalog				

COMPUTER CATALOG PROFILE (Continued)

COM Catalog ________________

Book Catalog ________________

Other ________________

20. What kind of backup is available to patrons if the computer system goes down?

21. Number of registered borrowers:

Appendix K

THE CYCLE 1 USER QUESTIONNAIRE

OFFICE USE ONLY

TERMINAL I.D.

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z 0 1 2 3 4 5 6 7 8 9	A B C D E F G H I J K L M N O P Q R S T U V W X Y Z 0 1 2 3 4 5 6 7 8 9	A B C D E F G H I J K L M N O P Q R S T U V W X Y Z 0 1 2 3 4 5 6 7 8 9	A B C D E F G H I J K L M N O P Q R S T U V W X Y Z 0 1 2 3 4 5 6 7 8 9

DATE

MO.		DAY		YR.	
0 1	0 1 2 3 4 5 6 7 8 9	0 1 2 3	0 1 2 3 4 5 6 7 8 9	8 9	0 1 2 3 4 5 6 7 8 9

TIME

HR.		MIN.	
0 1 2 3 4 5 6 7 8 9	0 1 2 3 4 5 6 7 8 9	0 1 2 3 4 5 6 7 8 9	0 1 2 3 4 5 6 7 8 9

DATA COLLECTOR

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z	A B C D E F G H I J K L M N O P Q R S T U V W X Y Z	A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

TERM LOCATION

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z	A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

LIBRARY SYSTEM

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z	A B C D E F G H I J K L M N O P Q R S T U V W X Y Z	A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

VERIFIED: ☐

BY: ____________________

DATE: ____________________

COUNCIL ON LIBRARY RESOURCES

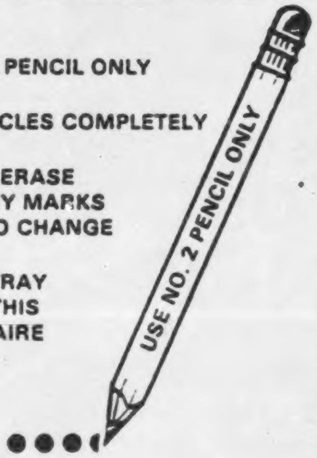
COMPUTER CATALOG STUDY

USER QUESTIONNAIRE

THE LIBRARY IS CONDUCTING A STUDY OF ITS COMPUTER CATALOG TO IMPROVE IT. THIS QUESTIONNAIRE IS A WAY TO COMMUNICATE YOUR VIEWS. IT SHOULD TAKE YOU ONLY ABOUT 10 MINUTES TO COMPLETE. YOUR RESPONSES ARE CONFIDENTIAL. PLEASE DO NOT WRITE YOUR NAME ANYWHERE ON THE QUESTIONNAIRE. THANK YOU.

MARKING INSTRUCTIONS

- USE A NO. 2 PENCIL ONLY
- FILL THE CIRCLES COMPLETELY
- BE SURE TO ERASE CLEANLY ANY MARKS YOU WISH TO CHANGE
- MAKE NO STRAY MARKS ON THIS QUESTIONNAIRE



5291

DO NOT WRITE IN THIS AREA

PART 1: ABOUT YOUR MOST RECENT SEARCH

INSTRUCTIONS: Please answer these questions with respect to the LAST TIME you used the computer catalog.

1. I CAME TO THE SEARCH WITH:
(Mark all that apply)

a. A complete author's name ○
b. Part of an author's name ○
c. A complete title ○
d. Part of a title ○
e. A topic word(s) ○
f. A subject heading(s) ○
g. A complete call number ○
h. Part of a call number ○
i. Other: ○

2. BY SEARCHING THE COMPUTER CATALOG I WAS TRYING TO FIND:
(Mark all that apply)

a. A specific book, journal or magazine ○
b. Books, journals or magazines on a topic ○
c. Books by a specific author ○
d. Information such as publisher, date, spelling of a name, etc. ○
e. If a book that I know the library has is on the shelf ○
f. Another library that has a book, journal or magazine that I want ○
g. What it is like to use the computer catalog ○
h. Other: ○

3. I SEARCHED FOR WHAT I WANTED BY:
(Mark all that apply)

a. A complete author's name ○
b. Part of an author's name ○
c. A complete title ○
d. Part of a title ○
e. A topic word(s) ○
f. A subject heading(s) ○
g. A complete call number ○
h. Part of a call number ○
i. Other: ○

4. I NEED THIS INFORMATION FOR:
(Mark all that apply)

a. Recreational uses ○
b. Making or fixing something ○
c. My work or job ○
d. Personal interest ○
e. A hobby ○
f. Class or course reading ○
g. A course paper or report ○
h. A thesis or dissertation ○
i. Writing a paper, article or book ○
j. Teaching or planning a course ○
k. Keeping up on a topic or subject ○

5. IN THIS SEARCH I FOUND:
(Mark one only)

a. More than I was looking for ○
b. All or most of what I was looking for ○
c. Some of what I was looking for ○
d. Nothing I was looking for ○

6. IN RELATION TO WHAT I WAS LOOKING FOR, THE SEARCH WAS:
(Mark one only)

a. Very satisfactory ○
b. Somewhat satisfactory ○
c. Somewhat unsatisfactory ○
d. Very unsatisfactory ○

7. I CAME ACROSS THINGS OF INTEREST OTHER THAN WHAT I WAS LOOKING FOR:

a. Yes ○
b. No ○

8. IN ADDITION TO THIS COMPUTER CATALOG SEARCH I HAVE ALSO USED OR WILL USE:
(Mark all that apply)

a. A card, book or microfilm catalog ○
b. Printed indexes ○
c. None of the above ○
d. Other: ○

9. I GOT HELP IN DOING THIS COMPUTER CATALOG SEARCH FROM:
(Mark all that apply)

a. I did not get help ○
b. Printed material or signs ○
c. Instructions on the terminal screen ○
d. Library staff member ○
e. Person nearby ○

10. **MY OVERALL OR GENERAL ATTITUDE TOWARD THE COMPUTER CATALOG IS:**
(Mark one only)
a. Very favorable .... ○
b. Somewhat favorable .... ○
c. Somewhat unfavorable .... ○
d. Very unfavorable .... ○

11. **HOW LIKELY ARE YOU TO USE THE COMPUTER CATALOG IN THE FUTURE?**
a. Very likely .... ○
b. Somewhat likely .... ○
c. Somewhat unlikely .... ○
d. Very unlikely .... ○

PART 2: YOUR EXPERIENCE WITH COMPUTER CATALOG FEATURES

INSTRUCTIONS: If you strongly agree with a statement, mark the "STRONGLY AGREE" column. If you strongly disagree, mark the "STRONGLY DISAGREE" column. If you agree but not strongly, or disagree but not strongly, mark either the "AGREE" or the "DISAGREE" column depending on which corresponds to your opinion. If you neither agree at all nor disagree at all, mark the center "NEITHER AGREE NOR DISAGREE" column. Remember to mark the single column for each question that corresponds most closely to how you feel. If the statement does not apply to your experience at the computer catalog, mark the column, "DOES NOT APPLY".

	STRONGLY AGREE	AGREE	NEITHER AGREE NOR DISAGREE	DISAGREE	STRONGLY DISAGREE	DOES NOT APPLY
REMEMBERING THE CORRECT WAY TO ENTER:						
12. A title search is difficult	SA	AG	N	DA	SD	NA
13. An author search is easy	SA	AG	N	DA	SD	NA
14. A subject search is difficult	SA	AG	N	DA	SD	NA
15. A call number search is easy	SA	AG	N	DA	SD	NA
16. A combined author/title search is difficult	SA	AG	N	DA	SD	NA
DURING A SEARCH:						
17. Remembering commands in the middle of the search is easy	SA	AG	N	DA	SD	NA
18. Finding the correct subject term is difficult	SA	AG	N	DA	SD	NA
19. Scanning through a long display (forward or backward) is easy	SA	AG	N	DA	SD	NA
20. Increasing the result when too little is retrieved is difficult	SA	AG	N	DA	SD	NA
21. Reducing the result when too much is retrieved is easy	SA	AG	N	DA	SD	NA
22. Understanding explanations on the screen is difficult	SA	AG	N	DA	SD	NA
23. Using codes or abbreviations for searching is easy	SA	AG	N	DA	SD	NA
24. Understanding codes or abbreviations on the screen is difficult	SA	AG	N	DA	SD	NA
25. Library names or abbreviations on the screen are easy to understand	SA	AG	N	DA	SD	NA
26. Locating call numbers on the screen is difficult	SA	AG	N	DA	SD	NA
27. Understanding explanations for searching with a short form of a name or a word (truncation) is easy	SA	AG	N	DA	SD	NA
28. Understanding explanations for using logical terms like AND, OR, NOT is difficult	SA	AG	N	DA	SD	NA
29. Remembering the exact sequence or order of commands is easy	SA	AG	N	DA	SD	NA
30. Understanding the initial instructions on the screen is difficult	SA	AG	N	DA	SD	NA
31. Understanding the display for a single book, journal or magazine is easy	SA	AG	N	DA	SD	NA
32. Understanding the display that shows more than a single book, journal or magazine is difficult	SA	AG	N	DA	SD	NA
33. Interrupting or stopping the display of information is easy	SA	AG	N	DA	SD	NA
IN GENERAL:						
34. Typing in exact spelling, initials, spaces and hyphens is difficult to do	SA	AG	N	DA	SD	NA
35. Knowing what is included in the computer catalog is easy to remember	SA	AG	N	DA	SD	NA

DOES NOT APPLY
STRONGLY DISAGREE
DISAGREE
NEITHER AGREE NOR DISAGREE
AGREE
STRONGLY AGREE

IN GENERAL:

36. The years of publication that are included in the computer catalog are difficult to remember	SA	AG	N	DA	SD	NA
37. The order in which items are displayed is easy to understand	SA	AG	N	DA	SD	NA
38. Displayed messages are too long	SA	AG	N	DA	SD	NA
39. Selecting from a list of choices takes too much time	SA	AG	N	DA	SD	NA
40. Entering commands when I want to during the search process is difficult	SA	AG	N	DA	SD	NA
41. Good typing skills are required to use the computer catalog	SA	AG	N	DA	SD	NA

42. Comments:

PART 3: YOUR EXPERIENCE AT THE COMPUTER CATALOG TERMINAL

INSTRUCTIONS: Continue to mark your degree of agreement or disagreement as in the previous section.

DOES NOT APPLY
STRONGLY DISAGREE
DISAGREE
NEITHER AGREE NOR DISAGREE
AGREE
STRONGLY AGREE

43. It is hard to find a free terminal	SA	AG	N	DA	SD	NA

AT THE TERMINAL I USED:

44. The keyboard is confusing to use	SA	AG	N	DA	SD	NA
45. There is too much glare on the screen	SA	AG	N	DA	SD	NA
46. The letters and numbers are easy to read	SA	AG	N	DA	SD	NA
47. The lighting around the terminal is too bright	SA	AG	N	DA	SD	NA
48. The writing space at the terminal is adequate	SA	AG	N	DA	SD	NA
49. Nearby noise is distracting	SA	AG	N	DA	SD	NA
50. The height of the terminal table is about right	SA	AG	N	DA	SD	NA
51. The rate at which the computer responds is too slow	SA	AG	N	DA	SD	NA
52. The availability of signs and brochures is adequate	SA	AG	N	DA	SD	NA
53. Signs and brochures are not very useful	SA	AG	N	DA	SD	NA
54. Library staff are usually available to assist me	SA	AG	N	DA	SD	NA
55. The staff advice is often not helpful	SA	AG	N	DA	SD	NA

IF THERE IS NO PRINTER AT YOUR TERMINAL CONTINUE TO PART 4

IF THERE IS A PRINTER AT YOUR TERMINAL ANSWER THESE QUESTIONS

DOES NOT APPLY
STRONGLY DISAGREE
DISAGREE
NEITHER AGREE NOR DISAGREE
AGREE
STRONGLY AGREE

56. Using the printer is difficult	SA	AG	N	DA	SD	NA
57. The legibility of a copy from the printer is adequate	SA	AG	N	DA	SD	NA
58. The printer noise is distracting	SA	AG	N	DA	SD	NA

PART 4: IMPROVING THE COMPUTER CATALOG

INSTRUCTIONS: **Select the response or responses that best reflect your views about changes that should be made in the computer catalog.**

59. WHAT ADDITIONAL FEATURES WOULD YOU LIKE THE COMPUTER CATALOG TO HAVE? (Select up to four)

a. Providing step by step instructions ○
b. Searching by any word or words in a title ○
c. Searching by any word or words in a subject heading ○
d. Limiting search results by date of publication ○
e. Limiting search results by language ○
f. Ability to search by journal title abbreviations ○
g. Ability to change the order in which items are displayed ○
h. Ability to view a list of words related to my search words ○
i. Ability to search for illustrations and bibliographies ○
j. Ability to search words that are next to each other ○
k. Ability to print search results ○
l. Ability to search a book's table of contents, summary or index ○
m. None ○
n. Other: ○

☐

60. WHICH COMPUTER CATALOG SERVICE IMPROVEMENTS WOULD YOU LIKE THE LIBRARY TO MAKE? (Select up to four)

a. More terminals ○
b. Terminals at locations other than near the card catalog ○
c. Terminals at places other than library buildings ○
d. A chart of commands posted at the terminal ○
e. Manual or brochure at the terminal ○
f. An instruction manual for purchase ○
g. Training sessions ○

(Continued)

60. (Continued)

h. More staff assistance with the computer catalog ○
i. Slide/tape/cassette training program ○
j. More of the library's books in the computer catalog ○
k. More kinds of material such as journals, films, maps, etc. in the computer catalog ○
l. None ○
m. Other: ○

☐

61. WHAT ADDITIONAL KINDS OF MATERIALS WOULD YOU LIKE TO SEE INCLUDED IN THE COMPUTER CATALOG? (Select up to four)

a. More dissertations ○
b. More motion picture films ○
c. More government publications ○
d. More journal or magazine titles ○
e. More maps ○
f. More manuscripts ○
g. More music scores ○
h. More newspapers ○
i. More phonograph records or tapes ○
j. More technical reports ○
k. More of the library's older books ○
l. None ○
m. Other: ○

☐

JUST A FEW MORE QUESTIONS—

PLEASE CONTINUE →

PART 5: COMPARING THE CARD CATALOG AND THE COMPUTER CATALOG

INSTRUCTIONS: Compare your experience of the card catalog with your experience of the computer catalog. For each statement indicate whether the CARD CATALOG IS SUPERIOR, the COMPUTER CATALOG IS SUPERIOR or there is NO DIFFERENCE between the two. "Card Catalog" includes book catalogs and microfilm catalogs.

	CARD CATALOG SUPERIOR	THERE IS NO DIFFERENCE	COMPUTER CATALOG SUPERIOR
62. In terms of overall searching speed	○	○	○
63. To search among all or most of the books in the library	○	○	○
64. To search for a specific book, journal or magazine	○	○	○
65. To search for books published in recent years	○	○	○
66. To find a few books on a topic	○	○	○
67. To scan through several book titles	○	○	○
68. To learn to use without assistance	○	○	○
69. To prepare a comprehensive bibliography	○	○	○

PART 6: ABOUT YOURSELF

INSTRUCTIONS: Your responses are confidential. Please do not write your name anywhere on this questionnaire.

70. I USE THIS LIBRARY:
- a. Daily ○
- b. Weekly ○
- c. Monthly ○
- d. About four times a year ○
- e. About once a year ○
- f. Not before today ○

71. I USE THIS COMPUTER CATALOG:
- a. Every library visit ○
- b. Almost every visit ○
- c. Occasionally ○
- d. Rarely ○
- e. Not before today ○

72. I USE THIS LIBRARY'S BOOK, CARD OR MICROFILM CATALOG:
- a. Every visit ○
- b. Almost every visit ○
- c. Occasionally ○
- d. Rarely ○
- e. Not before today ○

73. THE USE OF COMPUTER TECHNOLOGY LIKE THE COMPUTER CATALOG IS:
- a. Very familiar to me
- b. Somewhat familiar to me
- c. Somewhat unfamiliar to me
- d. Very unfamiliar to me

74. I USE A COMPUTER TERMINAL OTHER THAN THE LIBRARY'S TERMINALS:
- a. Daily ○
- b. Weekly ○
- c. Monthly ○
- d. About four times a year ○
- e. About once a year ○
- f. Never ○

75. I FIRST BECAME AWARE OF THE COMPUTER CATALOG FROM: (Mark all that apply)
- a. Seeing a terminal in the library ○
- b. Library tour or orientation ○
- c. An article or written announcement ○
- d. A course instructor ○
- e. A friend or family member ○
- f. Library staff ○
- g. Other: ○

76. I LEARNED HOW TO USE THE COMPUTER CATALOG: (Mark all that apply)
- a. By myself
- b. From a friend
- c. Using printed instructions
- d. Using instructions on the terminal screen
- e. From the library staff
- f. From a library course or orientation
- g. From a slide/tape/cassette program
- h. Other:

77. MY AGE GROUP IS:

- a. 14 and under ○
- b. 15-19 years ○
- c. 20-24 years ○
- d. 25-34 years ○
- e. 35-44 years ○
- f. 45-54 years ○
- g. 55-64 years ○
- h. 65 and over ○

CONTINUE TO 78 →

78. MARK YOUR CURRENT GRADE OR HIGHEST GRADE COMPLETED:

Grade School or Elementary School

- a. Up to five ○
- b. Six ○
- c. Seven ○
- d. Eight ○

High School or Secondary School

- e. Nine ○
- f. Ten ○
- g. Eleven ○
- h. Twelve ○

College or University

- i. Thirteen ○
- j. Fourteen ○
- k. Fifteen ○
- l. Sixteen ○
- m. Over sixteen ○

IF YOU ARE COMPLETING THIS QUESTIONNAIRE AT A COLLEGE OR UNIVERSITY ANSWER THE NEXT 3 QUESTIONS.

IF YOU ARE COMPLETING THIS QUESTIONNAIRE AT A PUBLIC LIBRARY STOP HERE AND RETURN THE QUESTIONNAIRE. THANK YOU FOR PARTICIPATING IN THIS STUDY OF THE COMPUTER CATALOG.

79. THE CATEGORY THAT BEST DESCRIBES MY ACADEMIC AREA IS:

- a. Arts and Humanities ○
- b. Natural Sciences ○
- c. Social Sciences ○
- d. Agriculture ○
- e. Business/Management ○
- f. Education ○
- g. Engineering ○
- h. Medical/Health Sciences ○
- i. Law ○
- j. Major not declared ○
- k. Interdisciplinary ○

80. THE MAIN FOCUS OF MY ACADEMIC WORK AT THE PRESENT TIME IS:

- a. Course Work ○
- b. Teaching ○
- c. Research ○
- d. Both Teaching and Research ○
- e. Teaching and Course Work ○
- f. Research and Course Work ○

81. MY PRESENT AFFILIATION WITH THIS COLLEGE OR UNIVERSITY IS:

- a. Undergraduate ○
- b. Graduate - master's level ○
- c. Graduate - doctoral level ○
- d. Faculty ○
- e. Nonfaculty Research Staff ○
- f. Nonfaculty Teaching Staff ○
- g. College or University Staff ○
- h. Other status ○
- i. Alumnus or Alumna ○
- j. No affiliation ○

THIS COMPLETES THE QUESTIONNAIRE. PLEASE RETURN IT.

THANK YOU FOR PARTICIPATING IN THIS STUDY OF THE COMPUTER CATALOG.

SUPPLEMENTARY QUESTIONNAIRE ITEMS

82 ○○○○○
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Appendix L

THE CYCLE 1 NON-USER QUESTIONNAIRE

COUNCIL ON LIBRARY RESOURCES

COMPUTER CATALOG STUDY

QUESTIONNAIRE

THE LIBRARY HAS A COMPUTER CATALOG AND NOT EVERYONE HAS HAD A CHANCE TO USE IT YET. IF YOU HAVE NEVER USED THE COMPUTER CATALOG YOU CAN CONTRIBUTE TO THE QUALITY OF LIBRARY SERVICES BY COMPLETING THIS QUESTIONNAIRE. IT TAKES ABOUT FIVE MINUTES. YOUR RESPONSES ARE CONFIDENTIAL. PLEASE DO NOT WRITE YOUR NAME ANYWHERE ON THE QUESTIONNAIRE. THANK YOU.

OFFICE USE ONLY

LIBRARY SYSTEM			LOCATION		DATA COLLECTOR			DATE MO.		DATE DAY		DATE YR.	
○	○	○	○	○	○	○	○	0	0	0	0		0
A	A	A	A	A	A	A	A	1	1	1	1		1
B	B	B	B	B	B	B	B		2	2	2		2
C	C	C	C	C	C	C	C		3	3	3		3
D	D	D	D	D	D	D	D		4		4		4
E	E	E	E	E	E	E	E		5		5		5
F	F	F	F	F	F	F	F		6		6		6
G	G	G	G	G	G	G	G		7		7		7
H	H	H	H	H	H	H	H		8		8	8	8
I	I	I	I	I	I	I	I		9		9	9	9
J	J	J	J	J	J	J	J						
K	K	K	K	K	K	K	K						
L	L	L	L	L	L	L	L						
M	M	M	M	M	M	M	M						
N	N	N	N	N	N	N	N						
O	O	O	O	O	O	O	O						
P	P	P	P	P	P	P	P						
Q	Q	Q	Q	Q	Q	Q	Q						
R	R	R	R	R	R	R	R						
S	S	S	S	S	S	S	S						
T	T	T	T	T	T	T	T						
U	U	U	U	U	U	U	U						
V	V	V	V	V	V	V	V						
W	W	W	W	W	W	W	W						
X	X	X	X	X	X	X	X						
Y	Y	Y	Y	Y	Y	Y	Y						
Z	Z	Z	Z	Z	Z	Z	Z						

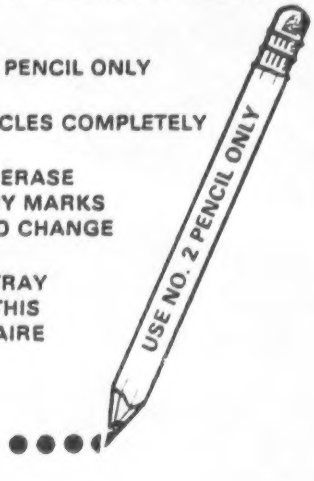
VERIFIED: ☐

BY: ____________________

DATE: ____________________

MARKING INSTRUCTIONS

- USE A NO. 2 PENCIL ONLY
- FILL THE CIRCLES COMPLETELY
- BE SURE TO ERASE CLEANLY ANY MARKS YOU WISH TO CHANGE
- MAKE NO STRAY MARKS ON THIS QUESTIONNAIRE



3092

DO NOT WRITE IN THIS AREA

NCS Trans-Optic CS-15108:321

PART 1: WHAT YOU THINK ABOUT THE COMPUTER CATALOG

INSTRUCTIONS: Please mark the response that best describes how you view a computer catalog.

1. I HAVE NOT USED THE COMPUTER CATALOG UP TO NOW BECAUSE:
(Mark all that apply)
   - a. I do not like to use computers .... ○
   - b. I did not know there was a computer catalog ... ○
   - c. I do not know where it is .... ○
   - d. I have not had time to learn how to use it ..... ○
   - e. I do not know if there are training sessions on how to use it .... ○
   - f. There has not been any staff at the terminals to assist me in using it .... ○
   - g. The terminals were all in use when I wanted to use it .... ○
   - h. I have not needed to use any library catalog recently .... ○
   - i. The card catalog is easier to use .... ○
   - j. The card catalog contains more of the information I need .... ○
   - k. Other: .... ○

MARK ONE ONLY IN QUESTIONS 2-5

2. HOW MUCH TIME DO YOU THINK IT TAKES TO LEARN TO USE THE COMPUTER CATALOG?
   - a. 15 minutes or less .... ○
   - b. Between 15 minutes and 30 minutes .... ○
   - c. Between 30 minutes and an hour .... ○
   - d. Between an hour and ½ of a day .... ○
   - e. Between ½ of a day and a day .... ○
   - f. A day or more .... ○

3. HOW DIFFICULT OR EASY DO YOU THINK IT WOULD BE TO LEARN TO USE THE COMPUTER CATALOG?
   - a. Very difficult .... ○
   - b. Somewhat difficult .... ○
   - c. Somewhat easy .... ○
   - d. Very easy .... ○

4. MY OVERALL OR GENERAL ATTITUDE TOWARD THE COMPUTER CATALOG IS:
   - a. Very favorable .... ○
   - b. Somewhat favorable .... ○
   - c. Somewhat unfavorable .... ○
   - d. Very unfavorable .... ○

5. HOW LIKELY ARE YOU TO USE THE COMPUTER CATALOG IN THE FUTURE?
   - a. Very likely .... ○
   - b. Somewhat likely .... ○
   - c. Somewhat unlikely .... ○
   - d. Very unlikely .... ○

PART 2: COMPARING THE CARD CATALOG AND THE COMPUTER CATALOG

INSTRUCTIONS: Compare your experience of the card catalog with what you expect or think a computer catalog does. For each statement indicate whether the CARD CATALOG IS PROBABLY SUPERIOR, the COMPUTER CATALOG IS PROBABLY SUPERIOR or there is PROBABLY NO DIFFERENCE between the two. "Card Catalog" includes book catalogs and microfilm catalogs.

	CARD CATALOG PROBABLY SUPERIOR	PROBABLY IS NO DIFFERENCE	COMPUTER CATALOG PROBABLY SUPERIOR
6. In terms of overall searching speed	CDS	NO	CPS
7. To search among all or most of the books in the library	CDS	NO	CPS
8. To search for a specific book, journal or magazine	CDS	NO	CPS
9. To search for books published in recent years	CDS	NO	CPS
10. To find a few books on a topic	CDS	NO	CPS
11. To scan through several book titles	CDS	NO	CPS
12. To learn to use without assistance	CDS	NO	CPS
13. To prepare a comprehensive bibliography	CDS	NO	CPS

PART 3: ABOUT YOURSELF

INSTRUCTIONS: Your responses are confidential. Please do not write your name anywhere on this questionnaire.

14. I USE THIS LIBRARY:

- a. Daily .... ○
- b. Weekly .... ○
- c. Monthly .... ○
- d. About four times a year .... ○
- e. About once a year .... ○
- f. Not before today .... ○

15. I USE THIS LIBRARY'S BOOK, CARD OR MICROFILM CATALOG:

- a. Every visit .... ○
- b. Almost every visit .... ○
- c. Occasionally .... ○
- d. Rarely .... ○
- e. Not before today .... ○

16. THE USE OF COMPUTER TECHNOLOGY LIKE THE COMPUTER CATALOG IS:

- a. Very familiar to me .... ○
- b. Somewhat familiar to me .... ○
- c. Somewhat unfamiliar to me .... ○
- d. Very unfamiliar to me .... ○

17. I USE A COMPUTER TERMINAL OTHER THAN THE LIBRARY'S TERMINALS:

- a. Daily .... ○
- b. Weekly .... ○
- c. Monthly .... ○
- d. About four times a year .... ○
- e. About once a year .... ○
- f. Never .... ○

18. MY AGE GROUP IS:

- a. 14 and under .... ○
- b. 15-19 years .... ○
- c. 20-24 years .... ○
- d. 25-34 years .... ○
- e. 35-44 years .... ○
- f. 45-54 years .... ○
- g. 55-64 years .... ○
- h. 65 and over .... ○

19. MARK YOUR CURRENT GRADE OR HIGHEST GRADE COMPLETED:

Grade School or Elementary School

- a. Up to five .... ○
- b. Six .... ○
- c. Seven .... ○
- d. Eight .... ○

High School or Secondary School

- e. Nine .... ○
- f. Ten .... ○
- g. Eleven .... ○
- h. Twelve .... ○

College or University

- i. Thirteen .... ○
- j. Fourteen .... ○
- k. Fifteen .... ○
- l. Sixteen .... ○
- m. Over sixteen .... ○

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- e. Business/Management .... ○
- f. Education .... ○
- g. Engineering .... ○
- h. Medical/Health Sciences .... ○
- i. Law .... ○
- j. Major not declared .... ○
- k. Interdisciplinary .... ○

PLEASE CONTINUE ON THE BACK PAGE